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OM protein - protein search, using sw model

Run on: July 4, 2004, 04:30:15; Search time 21.0896 Seconds

(without alignments)

120.578 Million cell updates/sec

Title: US-09-641-802-31

Perfect score: 48

Sequence: 1 VESYVPLFP 9

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 1586107 seqs, 282547505 residues

Total number of hits satisfying chosen parameters: 422553

Minimum DB seq length: 7
Maximum DB seq length: 18

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 100 summaries

Database: A Geneseq 29Jan04:\*

Q

1: qeneseqp1980s:\*

2: geneseqp1990s:\*

3: geneseqp2000s:\*

4: geneseqp2001s:\*

5: geneseqp2002s:\*

6: geneseqp2003as:\*

7: geneseqp2003bs:\*

8: geneseqp2004s:\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## SUMMARIES

|        |       | ъ     |           |   |          |                    |
|--------|-------|-------|-----------|---|----------|--------------------|
| Result |       | Query |           |   |          |                    |
| No.    | Score | Match | Length DB |   | ID       | Description        |
| 1      | 48    | 100.0 | 9         | 2 | AAW42101 | Aaw42101 Colostrin |
| 2      | 48    | 100.0 | 9         | 4 | AAB72529 | Aab72529 Colostrin |
| 3      | 48    | 100.0 | . 9       | 4 | AAB72276 | Aab72276 Colostrin |
| 4      | 48    | 100.0 | 9         | 4 | AAB72561 | Aab72561 Colostrin |
| 5      | 48    | 100.0 | 9         | 5 | AA014607 | Aao14607 Neural ce |
| 6      | 48    | 100.0 | 9         | 5 | AAM51067 | Aam51067 Colostrin |
| 7      | 48    | 100.0 | 9         | 5 | AAE20258 | Aae20258 Colostrin |
| 8      | 44    | 91.7  | 8         | 4 | AAE07189 | Aae07189 Colostrin |
| 9      | 44    | 91.7  | 9         | 4 | AAE07199 | Aae07199 Modified  |
|        |       |       |           |   |          |                    |

| 7.0 | 2.4 |      |    | _ |                      |                    |
|-----|-----|------|----|---|----------------------|--------------------|
| 10  | 34  | 70.8 | 12 | 7 | ADE12722             | Ade12722 Hev b III |
| 11  | 34  | 70.8 | 12 | 7 | ADE12457             | Adel2457 Hev b III |
| 12  | 33  | 68.8 | 9  | 6 | ABR02117             | Abr02117 Human can |
| 13  | 33  | 68.8 | 10 | 6 | ABR02228             | Abr02228 Human can |
| 14  | 33  | 68.8 | 10 | 6 | ABR02236             | Abr02236 Human can |
| 15  | 33  | 68.8 | 10 | 6 | ABR01994             | Abr01994 Human can |
| 16  | 33  | 68.8 | 10 | 6 | ABR02606             | Abr02606 Human can |
| 17  | 33  | 68.8 | 10 | 6 |                      |                    |
|     |     |      |    |   | ABR03056             | Abr03056 Human can |
| 18  | 33  | 68.8 | 10 | 6 | ABR02424             | Abr02424 Human can |
| 19  | 33  | 68.8 | 15 | 5 | ABP46299             | Abp46299 Human BLy |
| 20  | 33  | 68.8 | 15 | 6 | ABR30067             | Abr30067 Human can |
| 21  | 33  | 68.8 | 15 | 6 | ABR30111             | Abr30111 Human can |
| 22  | 33  | 68.8 | 15 | 6 | ABR29962             | Abr29962 Human can |
| 23  | 33  | 68.8 | 15 | 6 | ABR30102             | Abr30102 Human can |
| 24  | 33  | 68.8 | 15 | 6 | ABR30015             | Abr30015 Human can |
| 25  | 33  | 68.8 | 15 | 6 | ABR30048             | Abr30048 Human can |
| 26  | 33  | 68.8 | 15 | 6 | ABR29971             |                    |
| 27  | 33  | 68.8 | 15 | 6 | ABR30004             | Abr29971 Human can |
|     |     |      |    |   |                      | Abr30004 Human can |
| 28  | 33  | 68.8 | 16 | 5 | ABP46252             | Abp46252 Human BLy |
| 29  | 29  | 60.4 | 9  | 6 | ABR02132             | Abr02132 Human can |
| 30  | 29  | 60.4 | 9  | 6 | ABR02528             | Abr02528 Human can |
| 31  | 29  | 60.4 | 9  | 6 | ABR02946             | Abr02946 Human can |
| 32  | 29  | 60.4 | 9  | 6 | ABR02332             | Abr02332 Human can |
| 33. | 29  | 60.4 | 10 | 5 | AAU82797             | Aau82797 Human Cal |
| 34  | 29  | 60.4 | 10 | 6 | ABR02235             | Abr02235 Human can |
| 35  | 29  | 60.4 | 10 | 6 | ABR02609             | Abr02609 Human can |
| 36  | 29  | 60.4 | 10 | 6 | ABR02053             | Abr02053 Human can |
| 37  | 29  | 60.4 | 10 | 6 | ABR02387             | Abr02387 Human can |
| 38  | 29  | 60.4 | 13 | 2 | AAW05005             |                    |
| 39  | 29  |      |    | 2 |                      | Aaw05005 Peptide r |
|     |     | 60.4 | 13 |   | AAW41667             | Aaw41667 Immunomod |
| 40  | 29  | 60.4 | 13 | 4 | AAU17675             | Aau17675 Novel sig |
| 41  | 29  | 60.4 | 13 | 6 | ABO27231             | Abo27231 Gab3 PXXP |
| 42  | 29  | 60.4 | 13 | 7 | ADB94383             | Adb94383 Novel hum |
| 43  | 29  | 60.4 | 14 | 1 | AAP80629             | Aap80629 Synthetic |
| 44  | 29  | 60.4 | 14 | 2 | AAW05004             | Aaw05004 Peptide r |
| 45  | 29  | 60.4 | 14 | 2 | AAW41666             | Aaw41666 Immunomod |
| 46  | 29  | 60.4 | 14 | 5 | ABP46646             | Abp46646 Human BLy |
| 47  | 28  | 58.3 | 10 | 5 | AAU82854             | Aau82854 Human Cal |
| 48  | 28  | 58.3 | 17 | 2 | AAW39045             | Aaw39045 Peptide r |
| 49  | 27  | 56.2 | 11 | 5 |                      | Aae18839 Human cal |
| 50  | 27  | 56.2 | 12 | 6 | ABR58779             | Abr58779 Alzheimer |
| 51  | 27  | 56.2 | 17 | 5 | ABG62499             |                    |
|     |     |      |    |   |                      | Abg62499 Eubacteri |
| 52  | 26  | 54.2 | 9  | 6 | ABR02683             | Abr02683 Human can |
| 53  | 26  | 54.2 | 9  | 6 | ABR01867             | Abr01867 Human can |
| 54  | 26  | 54.2 | 9  | 6 | ABR02933             | Abr02933 Human can |
| 55  | 26  | 54.2 | 9  | 6 | ABR02140             | Abr02140 Human can |
| 56  | 26  | 54.2 | 9  | 6 | ABR02483             | Abr02483 Human can |
| 57  | 26  | 54.2 | 9  | 6 | ABR02279             | Abr02279 Human can |
| 58  | 26  | 54.2 | 9  | 6 | ABR03110             | Abr03110 Human can |
| 59  | 26  | 54.2 | 10 | 6 | ABR03215             | Abr03215 Human can |
| 60  | 26  | 54.2 | 10 | 6 | ABR02390             | Abr02390 Human can |
| 61  | 26  | 54.2 | 10 | 6 | ABR02390<br>ABR02264 |                    |
|     |     |      |    |   |                      | Abr02264 Human can |
| 62  | 26  | 54.2 | 10 | 6 | ABR02798             | Abr02798 Human can |
| 63  | 26  | 54.2 | 10 | 6 | ABR02001             | Abr02001 Human can |
| 64  | 26  | 54.2 | 10 | 6 | ABR02622             | Abr02622 Human can |
| 65  | 26  | 54.2 | 11 | 2 | AAY27116             | Aay27116 EE antige |
| 66  | 26  | 54.2 | 11 | 4 | AAE11116             | Aaellll6 Tryptic p |
|     |     |      |    |   |                      |                    |

|    | 67 | 26 | 54.2 | 13 | 5 | AAE24109 | Aae24109 | Rice CO39 |
|----|----|----|------|----|---|----------|----------|-----------|
|    | 68 | 26 | 54.2 | 14 | 5 | ABP46522 | Abp46522 | Human BLy |
|    | 69 | 26 | 54.2 | 14 | 5 | ABP46699 |          | Human BLy |
| •  | 70 | 26 | 54.2 | 15 | 4 | AAB97743 | Aab97743 | gp100 der |
|    | 71 | 26 | 54.2 | 15 | 4 | AAB97741 |          | gp100 der |
| •  | 72 | 26 | 54.2 | 15 | 4 | AAB97742 |          | gp100 der |
|    | 73 | 26 | 54.2 | 15 | 4 | AAB98132 |          | Interfero |
| •  | 74 | 26 | 54.2 | 15 | 4 | AAB98131 | Aab98131 | Interfero |
| •  | 75 | 26 | 54.2 | 15 | 4 | AAB98133 | Aab98133 | Interfero |
| •  | 76 | 26 | 54.2 | 15 | 6 | ABR30033 |          | Human can |
| •  | 77 | 26 | 54.2 | 15 | 7 | ADC99931 | Adc99931 | Murine Sa |
| •  | 78 | 26 | 54.2 | 15 | 7 | ADD24103 | Add24103 | Breast ca |
| •  | 79 | 26 | 54.2 | 16 | 5 | ABP46250 | Abp46250 | Human BLy |
| 8  | 80 | 26 | 54.2 | 18 | 5 | AAO14472 |          | Peptide f |
|    | 81 | 26 | 54.2 | 18 | 6 | ABU08859 | Abu08859 | Loblolly  |
|    | 82 | 25 | 52.1 | 7  | 2 | AAY17016 | Aay17016 | Heat shoc |
|    | 83 | 25 | 52.1 | 7  | 4 | AAU72158 | Aau72158 | Melanoma  |
| 8  | 84 | 25 | 52.1 | 7  | 5 | AAU80708 | Aau80708 | Javelin p |
|    |    | 25 | 52.1 | 8  | 2 | AAY16845 | Aay16845 | Heat shoc |
|    |    | 25 | 52.1 | 10 | 2 | AAY45435 | Aay45435 | Immunogen |
|    |    | 25 | 52.1 | 10 | 6 | ABR06228 | Abr06228 | Human can |
|    |    | 25 | 52.1 | 11 | 2 | AAR86908 | Aar86908 | Tyrosine  |
|    |    | 25 | 52.1 | 14 | 7 | ADC98012 | Adc98012 | Signallin |
|    |    | 25 | 52.1 | 15 | 2 | AAW42254 | Aaw42254 | Biotinyla |
|    |    | 25 | 52.1 | 15 | 2 | AAW42265 | Aaw42265 | Biotinyla |
|    |    | 25 | 52.1 | 15 | 4 | AAG80099 |          | Chemokine |
|    |    | 25 | 52.1 | 15 | 5 | ABG92731 | Abg92731 | A. nidula |
|    |    | 25 | 52.1 | 15 | 5 | ABG92730 |          | A. nidula |
|    |    | 25 | 52.1 | 15 | 6 | ABR32153 |          | Human can |
|    |    | 25 | 52.1 | 15 | 6 | ABR31871 |          | Human can |
|    |    | 25 | 52.1 | 15 | 6 | ABR31736 |          | Human can |
|    |    | 25 | 52.1 | 15 | 6 | ABR31737 |          | Human can |
|    |    | 25 | 52.1 | 15 | 6 | ABR31709 | Abr31709 | Human can |
| 10 | 00 | 25 | 52.1 | 15 | 6 | ABR32272 | Abr32272 | Human can |

## ALIGNMENTS

```
RESULT 1
AAW42101
ID
     AAW42101 standard; peptide; 9 AA.
XX
AC
     AAW42101;
XX
DT
      09-SEP-1998 (first entry)
XX
DE
     Colostrinin derived nanopeptide.
XX
KW
     Colostrinin; nanopeptide; NP; central nervous system; CNS; neurological disorder; mental disorder; dementia; Alzheimer's disease;
KW
KW
      motor neurone disease; Parkinson's disease; psychosis; neurosis;
      immunological deficiency; cancer therapy; stimulantion; modulator;
KW
KW
      dietary supplement; cachexia; inhibition.
XX
OS
      Homo sapiens.
XX
```

```
WO9814473-A1.
PN
XX
PD
     09-APR-1998.
XX
PF
     03-OCT-1997; 97WO-GB002721.
XX
PR
     03-OCT-1996; 96PL-00316416.
XX
PA
     (HIRS-) HIRSZFELD INST IMMUNOLOGY & EXPERIMENTAL.
PA
     (GEOR-) GEORGIADES BIOTECH LTD.
XX
PI
     Janusz M, Lisowski J, Dubowska-Inglot A;
XX
DR
     WPI; 1998-250967/22.
XX
PT
     Use of colostrinin, or derived nonapeptide for treating chronic diseases
PT
     of the central nervous system - and immune system, also as dietary
PT
     supplement and for inhibiting development of Alzheimer's disease.
XX
PS
     Claim 51; Page 27; 34pp; English.
XX
     This is the amino acid sequence of the colostrinin derived nanopeptide
CC
     (NP). In the method of the invention colostrinin, and its NP are used to
CC
CC
     treat chronic disorders of the central nervous system (CNS), particularly
CC
     neurological and mental disorders such as dementia (Alzheimer's disease);
CC
     motor neurone disease (e.g. Parkinson's disease); psychosis and neurosis
CC
     (including assisting withdrawal from addictive drugs) and the immune
CC
     system, particularly bacterial or viral infections or acquired
CC
     immunological deficiency (e.g. where caused by cancer therapy).
     Colostrinin is a stimulant/modulator of the immune system and may also be
CC
     used as a dietary supplement, e.g. in babies who have not received
CC:
CC
     colostrum, young children or adults being given chemotherapy or suffering
CC
     from cachexia due to chronic disease, and to inhibit development of
CC
    Alzheimer's disease
XX
SO
     Sequence 9 AA;
  Query Match
                         100.0%; Score 48; DB 2; Length 9;
  Best Local Similarity 100.0%; Pred. No. 1.4e+06;
  Matches
            9; Conservative
                               0; Mismatches 0; Indels 0; Gaps
Qу
           1 VESYVPLFP 9
              Db
           1 VESYVPLFP 9
RESULT 2
AAB72529
ID
    AAB72529 standard; peptide; 9 AA.
XX
AC
    AAB72529;
XX
DT
    09-MAY-2001 (first entry)
XX
DE
    Colostrinin peptide #30.
XX
KW
    Dermatological; oxidative stress regulator; colostrinin.
```

```
XX
     Unidentified.
OS
XX
PN
     WO200112650-A2.
XX
     22-FEB-2001.
PD
XX
PF
     17-AUG-2000; 2000WO-US022665.
XX
PR
     17-AUG-1999;
                    99US-0149310P.
XX
PA
     (TEXA ) UNIV TEXAS SYSTEM.
XX
PI
     Stanton GJ, Hughes TK, Boldogh I;
XX
DR
     WPI; 2001-218342/22.
XX
PΤ
     Modulating oxidative stress level in a cell, involves contacting the cell
PT
     with an oxidative stress regulator selected from colostrinin, its
PT
     constituent peptide, analog or their combinations.
XX
PS
     Claim 6; Page 26; 48pp; English.
XX
CC
     The present invention relates to a method for modulating the oxidative
CC
     stress level in a cell or a patient, comprising contacting the cell with,
CC
     or administering to the patient, an oxidative stress regulator selected
     from colostrinin, or its constituent peptide (e.g. the present peptide),
CC
     to change the level of an oxidising species in the cell. The method can
CC
CC
     be used to treat oxidative damage to skin, by decreasing or preventing an
CC
     increase in the level of damage to a biomolecule of the patient
XX
SO
     Sequence 9 AA;
  Query Match
                          100.0%; Score 48; DB 4; Length 9;
  Best Local Similarity
                         100.0%; Pred. No. 1.4e+06;
            9; Conservative
                              0; Mismatches
                                                0; Indels
                                                                 0; Gaps
                                                                             0;
            1 VESYVPLFP 9
Qу
              1 VESYVPLFP 9
RESULT 3
ID
     AAB72276 standard; peptide; 9 AA.
XX
AC
     AAB72276;
XX
DT
     14-MAY-2001 (first entry)
XX
DE
     Colostrinin derived cytokine inducing peptide SEQ ID 31.
XX
KW
     Colostrinin; immune response; cytokine; blood cell proliferation;
KW
     central nervous system disorder; neurological diosrder; mental disorder;
     dementia; neurodegenerative disease; Alzheimer's disease; psychosis;
KW
KW
     neurosis; infection.
XX
```

```
Synthetic.
OS
XX
PN
     WO200111937-A2.
XX
PD
     22-FEB-2001.
XX
PF
     17-AUG-2000; 2000WO-US022818.
XX
PR
     17-AUG-1999;
                    99US-0149311P.
XX
PA
     (TEXA ) UNIV TEXAS SYSTEM.
PA
     (REGE-) REGEN THERAPEUTICS PLC.
XX
PI
     Stanton GJ, Hughes TK, Boldogh I, Georgiades J;
XX
DR
     WPI; 2001-202804/20.
XX
PT
     Inducing a cytokine and modulating an immune response, useful for
     treating central nervous system diseases and bacterial and viral
PΤ
PT
     infections, comprises administering colostrinin as an immunological
PT
     regulator.
XX
PS
     Claim 1; Page 34; 50pp; English.
XX
CC
     Sequences AAB72246 - AAB72275 represent peptides derived from clostrinin,
CC
     a proline rich polypeptide aggregate contained in colostrum. The peptides
CC
     have immune response modulatory activity, and are capable of inducing
CC
     cytokines. Colostrinin and its derived peptides are useful for inducing
CC
     cytokine production, for modulating an immunological response and for
     inducing blood cell proliferation. The peptides are useful in the
CC
CC
     treatment of disorders of the central nervous system, neurological
     disorders, mental disorders, dementia, neurodegenerative diseases,
CC
CC
     Alzheimer's disease, motor neurone disease, psychosis, neurosis, chronic
CC
     disorders of the immune system, bacterial and viral infections and
CC
     acquired immunological deficiencies
XX
SO
     Sequence 9 AA;
  Query Match
                          100.0%; Score 48; DB 4; Length 9;
  Best Local Similarity
                          100.0%; Pred. No. 1.4e+06;
                                                                 0; Gaps
            9; Conservative
                                0; Mismatches
                                                  0; Indels
                                                                             0;
Qу
            1 VESYVPLFP 9
              Db
            1 VESYVPLFP 9
RESULT 4
AAB72561
     AAB72561 standard; peptide; 9 AA.
XX
AC
     AAB72561;
XX
DT
     09-MAY-2001 (first entry)
XX
DE
     Colostrinin peptide #30.
XX
```

```
KW
     Neuroprotective; neural cell differentiation regulator; colostrinin;
ΚW
     colostrum.
XX
OS
     Unidentified.
XX
PN
     WO200112651-A2.
XX
PD
     22-FEB-2001.
XX
PF
     17-AUG-2000; 2000WO-US022774.
XX
PR
     17-AUG-1999;
                    99US-0149633P.
XX
PA
     (TEXA ) UNIV TEXAS SYSTEM.
XX
ΡI
     Boldogh I;
XX
DR
     WPI; 2001-226545/23.
XX
PT
     Use of colostrinin, its constituent peptide or analog as a neural cell
PT
     regulator, for promoting neural cell differentiation and treating damaged
PT
     neural cells in a patient.
XX
PS
     Claim 6; Page 22; 35pp; English.
XX
     The present invention relates to a method for promoting neural cell
CC
     differentiation and treating damaged neural cells, using colostrinin and
CC
CC
     colostrinin constituent peptides (e.g. the present peptide) as a neural
CC
     cell regulator. Colostrinin is a polypeptide complex found in colostrum
XX
     Sequence 9 AA;
SO
  Query Match
                          100.0%; Score 48; DB 4; Length 9;
  Best Local Similarity 100.0%; Pred. No. 1.4e+06;
          9; Conservative
                              0; Mismatches
                                                  0; Indels
                                                                 0; Gaps
                                                                             0;
Qу
            1 VESYVPLFP 9
              1 VESYVPLFP 9
RESULT 5
AA014607
     AAO14607 standard; peptide; 9 AA.
XX
AC
    AAO14607;
XX
DT
     27-MAY-2002 (first entry)
XX
DE
     Neural cell regulatory colostrinin peptide 30.
XX
     Neural cell differentiation; neural cell regulator; colostrinin peptide;
KW
KW
     neural cell formation; proline-rich polypeptide aggregate; colostrum;
KW
     neural cell treatment.
XX
OS
     Unidentified.
XX
```

```
Location/Qualifiers
     Modified-site
FT
FT
                     /note= "Optional C-terminal amide"
XX
PN
     WO200213851-A1.
XX
PD
     21-FEB-2002.
XX
PF
     17-AUG-2000; 2000WO-US022777.
XX
PR
     17-AUG-2000; 2000WO-US022777.
XX
PA
     (TEXA ) UNIV TEXAS SYSTEM.
XX
PΙ
     Boldogh I, Stanton JG, Hughes TK;
XX
DR
     WPI; 2002-269152/31.
XX
PT
     Promoting cell differentiation in a patient involves use of blood cell
     regulator selected from colostrinin, its constituent peptide and/or
PT
PT
     analog.
XX
PS
     Claim 7; Page 22; 37pp; English.
XX
CC
     The invention comprises a method for promoting cell differentiation (e.g.
CC
     neural cell differentiation). The method involves contacting cells with a
CC
     neural cell regulator (i.e. a colostrinin peptide) in order to change the
     cells in morphology to form neural cells. Colostrinin is a proline-rich
CC
     polypeptide aggregate that is present in colostrum. The method of the
CC
CC
     invention is useful for promoting the differentiation of cells and for
     treating damaged neural cells in a patient. The present amino acid
CC
     sequence represents a specifically claimed colostrinin peptide used in
CC
CC
     the method of the invention
XX
SQ
     Sequence 9 AA;
  Query Match
                          100.0%; Score 48; DB 5; Length 9;
  Best Local Similarity
                          100.0%; Pred. No. 1.4e+06;
  Matches
             9; Conservative
                                 0; Mismatches
                                                   0; Indels
                                                                  0; Gaps
                                                                              0;
Qv
            1 VESYVPLFP 9
              Db
            1 VESYVPLFP 9
RESULT 6
AAM51067
ID
     AAM51067 standard; peptide; 9 AA.
XX
AC
     AAM51067;
XX
DT
     30-MAY-2002
                  (first entry)
XX
DE
     Colostrinin constituent peptide.
XX
     Colostrinin; colostrum; beta-casein; human.
KW
XX
```

```
OS
     Homo sapiens.
XX
PN
     W0200213849-A1.
XX
PD
     21-FEB-2002.
XX
PF
     17-AUG-2000; 2000WO-US022775.
XX
PR
     17-AUG-2000; 2000WO-US022775.
XX
PA
     (TEXA ) UNIV TEXAS SYSTEM.
PA
     (REGE-) REGEN THERAPEUTICS PLC.
XX
PΙ
     Stanton GJ, Hughes TK, Boldogh I, Georgiades J;
XX
DR
     WPI; 2002-269150/31.
XX
     Modulation of blood cell proliferation in a patient involves use of blood
PT
PТ
     cell regulator selected from colostrinin, its constituent peptide and/or
PT
     analog.
XX
PS
     Example 1; Page 34; 54pp; English.
XX
CC
     The present sequence is that of a colostrinin constituent peptide that
CC
     has been classified as having a beta-casein homologue precursor. The
CC
     peptide has previously been identified as being useful in the treatment
     of disorders of the central nervous system, neurological disorders,
CC
CC
     mental disorders, dementia, neurodegenerative diseases, Alzheimer's
CC
     disease, motor neurone disease, psychosis, neurosis, chronic disorders of
     the immune system, diseases with a bacterial or viral aetiology, and
CC
     acquired immunological deficiencies. The present invention provides
CC
CC
     claimed colistrinin constituted peptides (see AAM51036-66) that are
CC
     useful as immunological regulators and as blood cell regulators. These
CC
     are used in claimed methods of the invention to modulate specific or
     nonspecific immune responses in patients, and to modulate cellular
CC
     proliferation or differentiation of blood cells, such as leucocytes.
CC
CC
     These methods specifically do not use the present colostrinin peptide
XX
SQ
     Sequence 9 AA;
  Query Match
                          100.0%; Score 48; DB 5; Length 9;
                          100.0%; Pred. No. 1.4e+06;
  Best Local Similarity
  Matches
             9; Conservative
                                0; Mismatches
                                                  0; Indels
                                                                 0; Gaps
                                                                              0;
            1 VESYVPLFP 9
Qу
              Db
            1 VESYVPLFP 9
RESULT 7
AAE20258
ΙD
     AAE20258 standard; peptide; 9 AA.
XX
АÇ
    AAE20258;
XX
     18-JUN-2002 (first entry)
DT
XX
```

```
Colostrinin constituent peptide #30.
DΕ
XX
     Blood cell regulator; colostrinin; constituent peptide; oxidative stress;
KW
     therapy; oxidative damage; skin; aging; wound healing; cell replacement;
KW
     tissue; organ; cosmetic procedure; repair; regeneration; preservation;
KW
     transplantation; implantation; dermatological; vulnerary.
KW
XX
OS
     Unidentified.
XX
FH
     Key
                     Location/Qualifiers
     Modified-site
FT
                     /note= "Optionally C-terminal amide"
FT
XX
     WO200213850-A1.
PN
XX
     21-FEB-2002.
PD
XX
     17-AUG-2000; 2000WO-US022776.
PF
XX
     17-AUG-2000; 2000WO-US022776.
PR
XX
     (TEXA ) UNIV TEXAS SYSTEM.
PA
XX
PΙ
     Stanton GJ, Hughes TK,
                              Boldogh I;
XX
     WPI; 2002-269151/31.
DR
XX
PT
     Composition useful for the modulation of blood cell proliferation in a
     patient comprises a blood cell regulator selected from colostrinin, its
PT
     constituent peptide and/or analog.
PΤ
XX
PS
     Claim 6; Page 26; 51pp; English.
XX
CC
     The invention relates to a composition which comprises a blood cell
CC
     regulator selected from colostrinin, its constituent peptide and/or
CC
     analogue. The invention is used for modulating the oxidative stress level
CC
     in a cell e.g. mammalian or human cell present in a cell culture, tissue,
CC
     organ, or organism; or for treating oxidative damage to the skin of a
CC
     patient e.g. animal or human; to modulate oxidative stress during/ after
CC
     a premature birth or normal birth, preventing/delaying aging in a
CC
     patient, enhancing wound healing, and the reduction of side effects of
CC
     cosmetic procedures. The method changes the level of an oxidising species
CC
     in the cell, such as decreases or prevents increase in the level of
CC
     damage to a biomolecule of the patient selected from DNA, protein and/or
CC
     lipid, compared to the same conditions when the oxidative stress
     regulator is not present. The modulation of oxidative stress results in
CC
CC
     enhanced repair, regeneration, and replacement of cells, tissues and
CC
     organs (e.g. kidney, liver, pancreas, skin, and the other internal and
     external organs), as well as enhanced preservation of such organs for
CC
     transplantation, implantation, or scientific research. The present
CC
CC
     sequence is a colostrinin constituent peptide
XX
SQ
     Sequence 9 AA;
  Query Match
                          100.0%; Score 48; DB 5; Length 9;
                          100.0%; Pred. No. 1.4e+06;
  Best Local Similarity
  Matches
            9; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
```

```
1 VESYVPLFP 9
Qy
              1 VESYVPLFP 9
Db
RESULT 8
AAE07189
     AAE07189 standard; peptide; 8 AA.
XΧ
AC
    AAE07189;
XX
     06-NOV-2001 (first entry)
DT
XX
     Colostrinin peptide 5.
DE
XX
     Colostrinin; nootropic; neuroprotective; immunomodulatory; antibacterial;
KW
     Parkinson's disease; Alzheimer's disease; mental disorder; food additive;
KW
     central nervous system disorder; neurodegenerative disorder; weight loss;
KW
     beta-amyloid plaque; psychosis; neurosis; cachexia; motor neuron disease;
KW
     acquired immunological deficiency; neurological disorder; dementia;
KW
     antiviral.
KW
XX
     Unidentified.
OS
XX
     WO200155199-A1.
PN
XX
     02-AUG-2001.
PD
XX
     26-JAN-2001; 2001WO-GB000329.
PF
XX
     26-JAN-2000; 2000GB-00001825.
PR
XX
PA
     (REGE-) REGEN THERAPEUTICS PLC.
XX
PI
     Georgiades JA;
XX
     WPI; 2001-488775/53.
DR
XX
     Peptide useful as an interalia in the treatment of e.g. disorders of the
PΤ
     immune system and the central nervous system comprises ten amino-terminal
PT
     amino acid sequence derived from peptides present in colostrinin.
PT
XX
     Claim 1; Page 15; 40pp; English.
PS
XX
     The invention relates to colostrinin peptide fragments which are useful,
CC
     inter alia, in the treatment of chronic disorders of the immune system
CC
     and the central nervous system. Colostrinin peptides are used as a
CC
     medicament in the treatment of neurological disorders e.g., dementia,
CC
     neurodegenerative disorders e.g., Alzheimer's disease, motor neuron
CC
     disease e.g., Parkinson's disease, mental disorders e.g. psychosis and
CC
     neurosis, in acquired immunological deficiencies, chronic bacterial and
CC
     viral infections and diseases characterised by the presence of beta-
CC
     amyloid plaques and as a dietary supplement for babies, small children,
CC
```

adults and senile persons, who have been subjected to chemotherapy or

have suffered from cachexia or weight loss due to the chronic disease.

Colostrinin peptides are also used as food additives and as an auxillary

CC

CC

CC

```
CC
     withdrawal treatment for drug addicts, after a period of detoxification
     and in persons dependent on stimulants. Colostrinin peptides are used to
CC
     prepare antibodies and to treat emotional disturbances, e.g. emotional
CC
     disturbances of psychiatric patients in a state of depression. These
CC
     colostrinin peptides improves the development of immune system in a new
CC
CC
     born child and to correct the immunological deficiencies in a child. The
CC
     present sequence is colostrinin peptide 5 related to the invention
XX
SQ
     Sequence 8 AA;
                          91.7%; Score 44; DB 4; Length 8;
 Query Match
  Best Local Similarity
                          100.0%; Pred. No. 1.4e+06;
            8; Conservative
                                0; Mismatches
                                                  0; Indels
                                                                              0;
                                                                 0; Gaps
            2 ESYVPLFP 9
Qу
              Db
            1 ESYVPLFP 8
RESULT 9
AAE07199
     AAE07199 standard; peptide; 9 AA.
XX
     AAE07199;
AC
XX
     06-NOV-2001 (first entry)
DT
XX
     Modified colostrinin cyclic peptide #5.
DE
XX
     Colostrinin; nootropic; neuroprotective; immunomodulatory; antibacterial;
KW
     Parkinson's disease; Alzheimer's disease; mental disorder; food additive;
KW
KW
     central nervous system disorder; neurodegenerative disorder; weight loss;
KW
     beta-amyloid plaque; psychosis; neurosis; cachexia; motor neuron disease;
KW
     acquired immunological deficiency; neurological disorder; dementia;
KW
     antiviral; cyclic.
XX
OS
     Synthetic.
XX
FH
     Key
                     Location/Qualifiers
FT
     Modified-site
FT
                     /note= "N-terminal acetyl; this residue forms a cyclic
FT
                     linkage with Pro found at the C-terminal end"
XX
ΡN
     WO200155199-A1.
XX
PD
     02-AUG-2001.
XX
ΡF
     26-JAN-2001; 2001WO-GB000329.
XX
     26-JAN-2000; 2000GB-00001825.
PR
XX
PΑ
     (REGE-) REGEN THERAPEUTICS PLC.
XX
PΙ
     Georgiades JA;
XX
DR
     WPI; 2001-488775/53.
XX
```

```
PT
     Peptide useful as an interalia in the treatment of e.g. disorders of the
     immune system and the central nervous system comprises ten amino-terminal
PT
PT
     amino acid sequence derived from peptides present in colostrinin.
XX
PS
     Example 2; Page 9; 40pp; English.
XX
CC
     The invention relates to colostrinin peptide fragments which are useful,
CC
     inter alia, in the treatment of chronic disorders of the immune system
CC
     and the central nervous system. Colostrinin peptides are used as a
    medicament in the treatment of neurological disorders e.g., dementia,
CC
CC
    neurodegenerative disorders e.g., Alzheimer's disease, motor neuron
CC
     disease e.g., Parkinson's disease, mental disorders e.g. psychosis and
CC
    neurosis, in acquired immunological deficiencies, chronic bacterial and
CC
     viral infections and diseases characterised by the presence of beta-
CC
    amyloid plaques and as a dietary supplement for babies, small children,
     adults and senile persons, who have been subjected to chemotherapy or
CC
    have suffered from cachexia or weight loss due to the chronic disease.
CC
CC
    Colostrinin peptides are also used as food additives and as an auxillary
CC
    withdrawal treatment for drug addicts, after a period of detoxification
CC
     and in persons dependent on stimulants. Colostrinin peptides are used to
    prepare antibodies and to treat emotional disturbances, e.g. emotional
CC
CC
    disturbances of psychiatric patients in a state of depression. These
CC
    colostrinin peptides improves the development of immune system in a new
CC
    born child and to correct the immunological deficiencies in a child. The
CC
    present sequence is modified colostrinin cyclic peptide #5 related to the
CC
    invention
XX
SO
    Sequence 9 AA;
  Query Match
                          91.7%; Score 44; DB 4; Length 9;
  Best Local Similarity
                         100.0%; Pred. No. 1.4e+06;
           8; Conservative
 Matches
                              0; Mismatches
                                                0; Indels
                                                                 0; Gaps
            2 ESYVPLFP 9
Qу
              Db
           2 ESYVPLFP 9
RESULT 10
ADE12722
    ADE12722 standard; peptide; 12 AA.
XX
AC
    ADE12722;
XX
DT
    29-JAN-2004 (first entry)
XX
DE
    Hev b III peptide fragment #1.
XX
KW
    Allergenic protein; latex; Hev b III; allergy; rubber.
XX
OS
    Hevea brasiliensis.
XX
PN
    EP1350797-A1.
XX
PD
    08-OCT-2003.
XX
PF
    15-SEP-1995; 2003EP-00008977.
```

```
XX
     16-SEP-1994;
                    94MY-00002468.
PR
PR
     04-MAY-1995;
                    95MY-00001205.
     15-SEP-1995;
                    95EP-00306534.
PR
XX
PA
     (NARP ) RUBBER RES INST MALAYSIA.
     (UYSA-) UNIV SAINS MALAYSIA.
PΑ
XX
PΙ
    Cardosa MJ,
                  Sharifah H, Samuel-Verghese S, Sunderasan E, Yeang HY;
PΙ
    Samsidar H;
XX
DR
    WPI; 2003-815068/77.
XX
PT
    New allergenic protein from latex or tissue of Hevea brasilensis, useful
PT
    as de-sensitizing agent in treatment of latex protein allergy, and in
PT
    identifying or quantifying antibodies in blood that mediate occurrence of
PT
    an allergic reaction.
XX
PS
    Disclosure; Page 9; 36pp; English.
XX
    The invention relates to an allergenic protein from the latex or tissue
CC
CC
    of Hevea brasiliensis that is designated Hev b III. Also disclosed are
CC
    internal peptide fragment of Hev b III. The allergenic protein of the
CC
    present invention is useful as de-sensitizing agents in the treatment of
CC
    latex protein allergy. The methods and compositions of the present
CC
    invention are also useful for identifying and/or quantifying antibodies
CC
    in blood or blood products and the level of allergen of natural rubber
CC
    latex present in latex concentrate, manufactured latex products or
CC
    products made from dry rubber that mediate occurrence of an allergic
CC
    reaction induced by natural rubber latex. The current sequence represents
CC
    a peptide fragment of Hev b III produced by tryptic digestion.
XX
    Sequence 12 AA;
SQ
 Query Match
                          70.8%;
                                  Score 34; DB 7; Length 12;
 Best Local Similarity
                          66.7%;
                                Pred. No. 13;
 Matches
            6; Conservative
                                 1; Mismatches
                                                   2; Indels
                                                                  0; Gaps
                                                                              0;
           1 VESYVPLFP 9
Qy
              1 | 1: | 1
Dh
           1 VSSYLPLLP 9
RESULT 11
ADE12457
ID
    ADE12457 standard; peptide; 12 AA.
XX
AC
    ADE12457;
XX
DT
    29-JAN-2004 (first entry)
XX
DE
    Hev b III peptide fragment #1.
XX
KW
    Allergenic protein; latex; Hev b III; allergy; rubber.
XX
OS
    Hevea brasiliensis.
XX
```

```
EP1350798-A1.
PN
XX
     08-OCT-2003.
PD
XX
     15-SEP-1995; 2003EP-00008978.
PF
XX
PR
     16-SEP-1994;
                    94MY-00002468.
     04-MAY-1995;
PR
                    95MY-00001205.
     15-SEP-1995;
PR
                    95EP-00306534.
XX
PΑ
     (NARP ) RUBBER RES INST MALAYSIA.
     (UYSA-) UNIV SAINS MALAYSIA.
PΑ
XX
                  Sharifah H, Samuel-Verghese S, Sunderasan E, Yeang HY;
PI
     Cardosa MJ,
PΙ
     Samsidar H;
XX
     WPI; 2003-805965/76.
DR
XX
PT
     New allergenic protein of natural rubber latex, useful as de-sensitizing
     agents in the treatment of latex protein allergy, and in identifying or
PT
PT
     quantifying antibodies in blood that mediate occurrence of an allergic
PT
     reaction.
XX
PS
     Claim 1; Page 16; 38pp; English.
XX
CC
     The invention relates to an allergenic protein from the latex or tissue
CC
     of Hevea brasiliensis that is designated Hev b III. Also disclosed are
CC
     internal peptide fragment of Hev b III. The allergenic protein of the
     present invention is useful as de-sensitizing agents in the treatment of
CC
CC
     latex protein allergy. The methods and compositions of the present
CC
     invention are also useful for identifying and/or quantifying antibodies
CC
     in blood or blood products and the level of allergen of natural rubber
CC
     latex present in latex concentrate, manufactured latex products or
CC
     products made from dry rubber that mediate occurrence of an allergic
CC
     reaction induced by natural rubber latex. The current sequence represents
CC
     a peptide fragment of Hev b III produced by tryptic digestion.
XX
SQ
     Sequence 12 AA;
                          70.8%; Score 34; DB 7; Length 12;
  Query Match
  Best Local Similarity
                          66.7%; Pred. No. 13;
  Matches
            6; Conservative
                                 1; Mismatches
                                                    2; Indels
                                                                  0; Gaps
                                                                              0;
            1 VESYVPLFP 9
Qу
              1 | | : | | |
Db
            1 VSSYLPLLP 9
RESULT 12
ABR02117
ΙD
     ABR02117 standard; peptide; 9 AA.
XX
AC
    ABR02117;
XX
DT
     19-MAY-2003 (first entry)
XX
DE
     Human cancer-related protein 74P3B3 HLA peptide #252.
```

```
XX
KW
     Human; cytostatic; vaccine; cancer; immune response; HLA;
ΚW
     human leukocyte antigen.
XX
OS
     Homo sapiens.
XX
PN
     WO200283921-A2.
XX
PD
     24-OCT-2002.
XX
PF
     10-APR-2002; 2002WO-US011654.
XX
PR
     10-APR-2001; 2001US-0282739P.
PR
     10-APR-2001; 2001US-0283112P.
PR
     25-APR-2001; 2001US-0286630P.
XX
PΑ
     (AGEN-) AGENSYS INC.
XX
PΙ
     Jakobovits A, Challita-Eid PM, Faris M, Ge W, Hubert RS;
PΙ
     Morrison K, Morrison RK, Raitano AB;
XX
DR
     WPI; 2003-075555/07.
XX
PT
     New composition comprising a substance that modulates the structure of
PT
     proteins and polynucleotides, useful for therapeutic, prognostic and
PT
     diagnostic reagents for eliciting cellular or humoral immune response in
PT
     cancer patients.
XX
PS
     Claim 13; Page 133; 1021pp; English.
XX
     The present invention relates to novel human cancer-related genes and
CC
CC
     proteins (ABZ78120-ABZ78168 and ABR01789-ABR01861). The genes and
CC
     proteins are useful for eliciting a humoral or cellular immune response.
CC
     The genes are useful as probes and primers for the amplification and/or
CC
     detection of genes, mRNAs or their fragments, as reagents for the
CC
     diagnosis and/or prognosis of cancer, as coding sequences capable of
     directing the expression of the protein, as tools for modulating or
CC
CC
     inhibiting the expression of genes and/or translation of transcripts, and
CC
     as therapeutic agents. The proteins and peptides are useful as
     therapeutic, prognostic and diagnostic reagents for cancer. The present
CC
CC
     sequence is a human leukocyte antigen (HLA) peptide, used in an example
CC
     from the invention
XX
SQ
     Sequence 9 AA;
  Query Match
                          68.8%; Score 33; DB 6; Length 9;
  Best Local Similarity
                          66.7%; Pred. No. 1.4e+06;
  Matches
            6; Conservative
                                0; Mismatches
                                                                  0; Gaps
                                                   3; Indels
                                                                              0;
            1 VESYVPLFP 9
Qу
              I \mid I \mid I \mid I \mid I
            1 VEQYCPWFP 9
RESULT 13
```

RESULT 13 ABR02228

ID ABR02228 standard; peptide; 10 AA.

```
XX
AC
     ABR02228;
XX
     19-MAY-2003 (first entry)
DΤ
XX
DE
     Human cancer-related protein 74P3B3 HLA peptide #363.
XX
KW
     Human; cytostatic; vaccine; cancer; immune response; HLA;
KW
     human leukocyte antigen.
XX
OS
     Homo sapiens.
XX
PN
     WO200283921-A2.
XX
PD
     24-OCT-2002.
XX
PF
     10-APR-2002; 2002WO-US011654.
XX
PR
     10-APR-2001; 2001US-0282739P.
PR
     10-APR-2001; 2001US-0283112P.
     25-APR-2001; 2001US-0286630P.
PR
XX
PΑ
     (AGEN-) AGENSYS INC.
XX
PI
     Jakobovits A, Challita-Eid PM, Faris M, Ge W, Hubert RS;
PI
     Morrison K, Morrison RK, Raitano AB;
XX
DR
     WPI; 2003-075555/07.
XX
PT
     New composition comprising a substance that modulates the structure of
     proteins and polynucleotides, useful for therapeutic, prognostic and
PT
     diagnostic reagents for eliciting cellular or humoral immune response in
PT
PT
     cancer patients.
XX
PS
     Claim 13; Page 134; 1021pp; English.
XX
CC
     The present invention relates to novel human cancer-related genes and
CC
     proteins (ABZ78120-ABZ78168 and ABR01789-ABR01861). The genes and
CC
     proteins are useful for eliciting a humoral or cellular immune response.
     The genes are useful as probes and primers for the amplification and/or
CC
     detection of genes, mRNAs or their fragments, as reagents for the
CC
CC
     diagnosis and/or prognosis of cancer, as coding sequences capable of
     directing the expression of the protein, as tools for modulating or
CC
     inhibiting the expression of genes and/or translation of transcripts, and
CC
     as therapeutic agents. The proteins and peptides are useful as
CC
CC
     therapeutic, prognostic and diagnostic reagents for cancer. The present
CC
     sequence is a human leukocyte antigen (HLA) peptide, used in an example
CC
     from the invention
XX
SQ
     Sequence 10 AA;
  Query Match
                          68.8%;
                                 Score 33; DB 6; Length 10;
  Best Local Similarity
                          66.78;
                                  Pred. No. 17;
 Matches
            6; Conservative
                                 0; Mismatches
                                                   3; Indels
                                                                 0; Gaps
                                                                              0:
```

```
RESULT 14
ABR02236
ID
     ABR02236 standard; peptide; 10 AA.
XX
AC
     ABR02236;
XX
DT
     19-MAY-2003 (first entry)
XX
DE
     Human cancer-related protein 74P3B3 HLA peptide #371.
XX
KW
     Human; cytostatic; vaccine; cancer; immune response; HLA;
KW
     human leukocyte antigen.
XX
os
     Homo sapiens.
XX
ΡN
     WO200283921-A2.
XX
PD
     24-OCT-2002.
XX
PF
     10-APR-2002; 2002WO-US011654.
XX
     10-APR-2001; 2001US-0282739P.
PR
     10-APR-2001; 2001US-0283112P.
PR
     25-APR-2001; 2001US-0286630P.
PR
XX
PA
     (AGEN-) AGENSYS INC.
XX
PΙ
     Jakobovits A, Challita-Eid PM, Faris M, Ge W, Hubert RS;
PΙ
     Morrison K, Morrison RK, Raitano AB;
XX
     WPI; 2003-075555/07.
DR
XX
PT
     New composition comprising a substance that modulates the structure of
     proteins and polynucleotides, useful for therapeutic, prognostic and
PT
PΤ
     diagnostic reagents for eliciting cellular or humoral immune response in
PT
     cancer patients.
XX
PS
     Claim 13; Page 134; 1021pp; English.
XX
CC
     The present invention relates to novel human cancer-related genes and
CC
     proteins (ABZ78120-ABZ78168 and ABR01789-ABR01861). The genes and
CC
     proteins are useful for eliciting a humoral or cellular immune response.
     The genes are useful as probes and primers for the amplification and/or
CC
CC
     detection of genes, mRNAs or their fragments, as reagents for the
CC
     diagnosis and/or prognosis of cancer, as coding sequences capable of
CC
     directing the expression of the protein, as tools for modulating or
CC
     inhibiting the expression of genes and/or translation of transcripts, and
CC
     as therapeutic agents. The proteins and peptides are useful as
CC
     therapeutic, prognostic and diagnostic reagents for cancer. The present
CC
     sequence is a human leukocyte antigen (HLA) peptide, used in an example
CC
     from the invention
XX
SQ
     Sequence 10 AA;
```

```
68.8%; Score 33; DB 6; Length 10;
  Query Match
  Best Local Similarity 66.7%; Pred. No. 17;
  Matches
             6; Conservative
                                 0; Mismatches
                                                   3; Indels
                                                                  0; Gaps
                                                                              0;
            1 VESYVPLFP 9
Qу
              11 11 11
Db
            2 VEQYCPWFP 10
RESULT 15
ABR01994
ID
     ABR01994 standard; peptide; 10 AA.
XX
AC
     ABR01994;
XX
DT
     19-MAY-2003 (first entry)
XX
DΕ
     Human cancer-related protein 74P3B3 HLA peptide #129.
XX
KW
     Human; cytostatic; vaccine; cancer; immune response; HLA;
KW
     human leukocyte antigen.
XX
OS
     Homo sapiens.
XX
PN
     W0200283921-A2.
XX
PD
     24-OCT-2002.
XX
PF
     10-APR-2002; 2002WO-US011654.
XX
PR
     10-APR-2001; 2001US-0282739P.
PR
     10-APR-2001; 2001US-0283112P.
PR
     25-APR-2001; 2001US-0286630P.
XX
PA
     (AGEN-) AGENSYS INC.
XX
PΙ
     Jakobovits A, Challita-Eid PM, Faris M, Ge W, Hubert RS;
PΙ
     Morrison K, Morrison RK, Raitano AB;
XX
    WPI; 2003-075555/07.
DR
XX
PT
     New composition comprising a substance that modulates the structure of
PT
     proteins and polynucleotides, useful for therapeutic, prognostic and
PT
     diagnostic reagents for eliciting cellular or humoral immune response in
PT
     cancer patients.
XX
PS
     Claim 13; Page 132; 1021pp; English.
XX
CC
     The present invention relates to novel human cancer-related genes and
CC
     proteins (ABZ78120-ABZ78168 and ABR01789-ABR01861). The genes and
CC
     proteins are useful for eliciting a humoral or cellular immune response.
CC
     The genes are useful as probes and primers for the amplification and/or
CC
     detection of genes, mRNAs or their fragments, as reagents for the
CC
     diagnosis and/or prognosis of cancer, as coding sequences capable of
CC
     directing the expression of the protein, as tools for modulating or
CC
     inhibiting the expression of genes and/or translation of transcripts, and
CC
     as therapeutic agents. The proteins and peptides are useful as
```

```
therapeutic, prognostic and diagnostic reagents for cancer. The present
CC
     sequence is a human leukocyte antigen (HLA) peptide, used in an example
CC
     from the invention
CC
XX
     Sequence 10 AA;
SQ
                          68.8%; Score 33; DB 6; Length 10;
 Query Match
                          66.7%; Pred. No. 17;
  Best Local Similarity
 Matches
            6; Conservative
                                 0; Mismatches
                                                   3; Indels
                                                                 0; Gaps
                                                                              0;
            1 VESYVPLFP 9
Qу
              \square
Db
            2 VEQYCPWFP 10
RESULT 16
ABR02606
     ABR02606 standard; peptide; 10 AA.
ΙD
XX
    ABR02606;
AC
XX
     19-MAY-2003 (first entry)
DT
XX
     Human cancer-related protein 74P3B3 HLA peptide #741.
DE
XX
     Human; cytostatic; vaccine; cancer; immune response; HLA;
KW
KW
     human leukocyte antigen.
XX
OS
     Homo sapiens.
XX
PN
     WO200283921-A2.
XX
PD
     24-OCT-2002.
XX
PF
     10-APR-2002; 2002WO-US011654.
XX
     10-APR-2001; 2001US-0282739P.
PR
PR
     10-APR-2001; 2001US-0283112P.
     25-APR-2001; 2001US-0286630P.
PR
XX
PΑ
     (AGEN-) AGENSYS INC.
XX
PΙ
     Jakobovits A, Challita-Eid PM, Faris M, Ge W, Hubert RS;
PΙ
     Morrison K, Morrison RK, Raitano AB;
XX
     WPI; 2003-075555/07.
DR
XX
PΤ
     New composition comprising a substance that modulates the structure of
PT
     proteins and polynucleotides, useful for therapeutic, prognostic and
     diagnostic reagents for eliciting cellular or humoral immune response in
PΤ
PT
     cancer patients.
XX
     Claim 13; Page 138; 1021pp; English.
PS
XX
     The present invention relates to novel human cancer-related genes and
CC
CC
     proteins (ABZ78120-ABZ78168 and ABR01789-ABR01861). The genes and
CC
     proteins are useful for eliciting a humoral or cellular immune response.
```

```
The genes are useful as probes and primers for the amplification and/or
CC
     detection of genes, mRNAs or their fragments, as reagents for the
CC
     diagnosis and/or prognosis of cancer, as coding sequences capable of
CC
     directing the expression of the protein, as tools for modulating or
CC
     inhibiting the expression of genes and/or translation of transcripts, and
CC
CC
     as therapeutic agents. The proteins and peptides are useful as
CC
     therapeutic, prognostic and diagnostic reagents for cancer. The present
     sequence is a human leukocyte antigen (HLA) peptide, used in an example
CC
CC
     from the invention
XX
SQ
     Sequence 10 AA;
  Query Match
                          68.8%; Score 33; DB 6; Length 10;
  Best Local Similarity
                          66.7%; Pred. No. 17;
 Matches
            6; Conservative 0; Mismatches
                                                                 0; Gaps
                                                                             0;
                                                   3; Indels
            1 VESYVPLFP 9
Qу
              2 VEQYCPWFP 10
Db
RESULT 17
ABR03056
     ABR03056 standard; peptide; 10 AA.
XX
AC
    ABR03056;
XX
DT
     19-MAY-2003 (first entry)
XX
DE
     Human cancer-related protein 74P3B3 HLA peptide #1191.
XX
KW
     Human; cytostatic; vaccine; cancer; immune response; HLA;
KW
     human leukocyte antigen.
XX
OS
     Homo sapiens.
XX
PN
     WO200283921-A2.
XX
     24-OCT-2002.
PD
XX
PF
     10-APR-2002; 2002WO-US011654.
XX
PR
     10-APR-2001; 2001US-0282739P.
     10-APR-2001; 2001US-0283112P.
PR
     25-APR-2001; 2001US-0286630P.
PR
XX
PA
     (AGEN-) AGENSYS INC.
XX
ΡI
     Jakobovits A, Challita-Eid PM, Faris M, Ge W, Hubert RS;
PI
     Morrison K, Morrison RK, Raitano AB;
XX
DR
     WPI; 2003-075555/07.
XX
PT
     New composition comprising a substance that modulates the structure of
     proteins and polynucleotides, useful for therapeutic, prognostic and
PT
     diagnostic reagents for eliciting cellular or humoral immune response in
PT
PT
     cancer patients.
```

```
XX
     Claim 13; Page 142; 1021pp; English.
PS
XX
    The present invention relates to novel human cancer-related genes and
CC
     proteins (ABZ78120-ABZ78168 and ABR01789-ABR01861). The genes and
CC
    proteins are useful for eliciting a humoral or cellular immune response.
CC
     The genes are useful as probes and primers for the amplification and/or
CC
     detection of genes, mRNAs or their fragments, as reagents for the
CC
CC
     diagnosis and/or prognosis of cancer, as coding sequences capable of
CC
     directing the expression of the protein, as tools for modulating or
     inhibiting the expression of genes and/or translation of transcripts, and
CC
     as therapeutic agents. The proteins and peptides are useful as
CC
     therapeutic, prognostic and diagnostic reagents for cancer. The present
CC
     sequence is a human leukocyte antigen (HLA) peptide, used in an example
CC
CC
     from the invention
XX
SQ
     Sequence 10 AA;
                          68.8%; Score 33; DB 6; Length 10;
 Query Match
  Best Local Similarity
                         66.7%; Pred. No. 17;
                                                                             0;
            6; Conservative
                                0; Mismatches
                                                   3; Indels
                                                                     Gaps
           1 VESYVPLFP 9
Qу
              2 VEQYCPWFP 10
Db
RESULT 18
ABR02424
    ABR02424 standard; peptide; 10 AA.
XX
AC
    ABR02424;
XX
DT
     19-MAY-2003 (first entry)
XX
DE
     Human cancer-related protein 74P3B3 HLA peptide #559.
XX
KW
     Human; cytostatic; vaccine; cancer; immune response; HLA;
     human leukocyte antigen.
KW
XX
OS
     Homo sapiens.
XX
PN
     WO200283921-A2.
XX
     24-OCT-2002.
PD
XX
     10-APR-2002; 2002WO-US011654.
PF
XX
     10-APR-2001; 2001US-0282739P.
PR
     10-APR-2001; 2001US-0283112P.
PR
PR
     25-APR-2001; 2001US-0286630P.
XX
PΑ
     (AGEN-) AGENSYS INC.
XX
     Jakobovits A, Challita-Eid PM, Faris M, Ge W, Hubert RS;
PΙ
PΙ
     Morrison K, Morrison RK, Raitano AB;
XX
```

```
WPI; 2003-075555/07.
DR
XX
РΤ
     New composition comprising a substance that modulates the structure of
     proteins and polynucleotides, useful for therapeutic, prognostic and
PT
     diagnostic reagents for eliciting cellular or humoral immune response in
PΤ
PΤ
     cancer patients.
XX
PS
     Claim 13; Page 136; 1021pp; English.
XX
CC
     The present invention relates to novel human cancer-related genes and
CC
     proteins (ABZ78120-ABZ78168 and ABR01789-ABR01861). The genes and
     proteins are useful for eliciting a humoral or cellular immune response.
CC
CC
     The genes are useful as probes and primers for the amplification and/or
CC
     detection of genes, mRNAs or their fragments, as reagents for the
CC
     diagnosis and/or prognosis of cancer, as coding sequences capable of
     directing the expression of the protein, as tools for modulating or
CC
     inhibiting the expression of genes and/or translation of transcripts, and
CC
CC
     as therapeutic agents. The proteins and peptides are useful as
     therapeutic, prognostic and diagnostic reagents for cancer. The present
CC
CC
     sequence is a human leukocyte antiqen (HLA) peptide, used in an example
CC
     from the invention
XX
     Sequence 10 AA;
SQ
                                  Score 33; DB 6; Length 10;
  Query Match
                          68.8%;
                          66.7%; Pred. No. 17;
  Best Local Similarity
  Matches
             6; Conservative
                                 0; Mismatches
                                                   3; Indels
                                                                  0; Gaps
                                                                              0;
            1 VESYVPLFP 9
Qу
              \square
Db
            2 VEQYCPWFP 10
RESULT 19
ABP46299
ID
     ABP46299 standard; peptide; 15 AA.
XX
AC
     ABP46299;
XX
DΤ
     19-AUG-2002 (first entry)
XX
DΕ
     Human BLyS binding scFv VH CDR3 SEQ ID 2310.
XX
KW
     BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
     tumour necrosis factor; B cell proliferation; B cell differentiation;
KW
KW
     immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW
     antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW
     systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW
     common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
OS
     Homo sapiens.
XX
PΝ
     WO200202641-A1.
XX
PD
     10-JAN-2002.
XX
PF'
     15-JUN-2001; 2001WO-US019110.
```

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XX
     16-JUN-2000; 2000US-0212210P.
PR
     17-OCT-2000; 2000US-0240816P.
PR
     16-MAR-2001; 2001US-0276248P.
PR
     21-MAR-2001; 2001US-0277379P.
PR
     25-MAY-2001; 2001US-0293499P.
PR
XX
PA
     (HUMA-) HUMAN GENOME SCI INC.
PΑ
     (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
XX
PΙ
     Ruben SM, Barash SC, Choi GH, Vaughan T, Hilbert D;
XX
DR
     WPI; 2002-114799/15.
XX
PT
     Antibodies against B Lymphocyte Stimulating polypeptides, useful for the
PT
     diagnosis and treatment of cancers and immune disorders.
XX
     Claim 2; Page 2968; 3148pp; English.
PS
XX
     This invention describes novel antibodies that immunospecifically bind to
CC
     B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC
     tumour necrosis factor (TNF) super family and induces B cell
CC
CC
     proliferation and differentiation. The antibodies of the invention have
     cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC
     antirheumatic and antiAIDS activity and can be used in vaccines to
CC
     inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC
CC
     and so may be used to detect and quantitate the presence of BLyS in
CC
     biological samples and may be used in this way to diagnose disease
CC
     associated with aberrant expression of BLyS. They may also be
CC
     administered to treat diseases associated with aberrant BLyS expression
     and activity such as cancer, immune, and autoimmune disorders and
CC
CC
     diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC
     immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC
     acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC
     the antibodies and fragments of the antibodies described in the method of
CC
     the invention
XX
SO
     Sequence 15 AA;
                         68.8%; Score 33; DB 5; Length 15;
  Query Match
                         85.7%; Pred. No. 26;
  Best Local Similarity
                               0; Mismatches
                                                                0; Gaps
                                                                             0;
 Matches
           6; Conservative
                                                  1; Indels
           3 SYVPLFP 9
Qу
             Db
           8 SYVPLLP 14
RESULT 20
ABR30067
     ABR30067 standard; peptide; 15 AA.
ID
XX
AC
    ABR30067;
XX
DT
     19-MAY-2003 (first entry)
XX
DE
     Human cancer-related protein 74P3B3 HLA peptide #2911.
```

```
XX
     Human; cytostatic; vaccine; cancer; immune response; HLA;
KW
     human leukocyte antigen.
KW
XX
     Homo sapiens.
OS
XX
     WO200283921-A2.
ΡN
XX
PD
     24-OCT-2002.
XX
PF
     10-APR-2002; 2002WO-US011654.
XX
     10-APR-2001; 2001US-0282739P.
PR
     10-APR-2001; 2001US-0283112P.
PR
     25-APR-2001; 2001US-0286630P.
PR
XX
     (AGEN-) AGENSYS INC.
PA
XX
PΙ
     Jakobovits A, Challita-Eid PM, Faris M,
                                                Ge W, Hubert RS;
     Morrison K, Morrison RK,
PI
                               Raitano AB;
XX
DR
     WPI; 2003-075555/07.
XX
PT
     New composition comprising a substance that modulates the structure of
     proteins and polynucleotides, useful for therapeutic, prognostic and
PT
PT
     diagnostic reagents for eliciting cellular or humoral immune response in
PT
     cancer patients.
XX
     Claim 13; Page 468; 1021pp; English.
PS
XX
CC
     The present invention relates to novel human cancer-related genes and
     proteins (ABZ78120-ABZ78168 and ABR01789-ABR01861). The genes and
CC
     proteins are useful for eliciting a humoral or cellular immune response.
CC
     The genes are useful as probes and primers for the amplification and/or
CC
CC
     detection of genes, mRNAs or their fragments, as reagents for the
     diagnosis and/or prognosis of cancer, as coding sequences capable of
CC
     directing the expression of the protein, as tools for modulating or
CC
     inhibiting the expression of genes and/or translation of transcripts, and
CC
CC
     as therapeutic agents. The proteins and peptides are useful as
     therapeutic, prognostic and diagnostic reagents for cancer. The present
CC
CC
     sequence is a human leukocyte antigen (HLA) peptide, used in an example
CC
     from the invention
XX
SQ
     Sequence 15 AA;
                          68.8%; Score 33; DB 6; Length 15;
  Query Match
  Best Local Similarity
                          66.7%; Pred. No. 26;
             6; Conservative
                                 0; Mismatches
                                                   3; Indels
                                                                 0; Gaps
                                                                              0;
  Matches
            1 VESYVPLFP 9
Qy
              11 + 11
            7 VEQYCPWFP 15
RESULT 21
```

ABR30111

ABR30111 standard; peptide; 15 AA.

```
XX
     ABR30111;
AC
XX
     19-MAY-2003 (first entry)
DT
XX
     Human cancer-related protein 74P3B3 HLA peptide #2955.
DΕ
XX
     Human; cytostatic; vaccine; cancer; immune response; HLA;
ΚW
KW
     human leukocyte antigen.
XX
OS
     Homo sapiens.
XX
PN
     WO200283921-A2.
XX
     24-OCT-2002.
PD
XX
     10-APR-2002; 2002WO-US011654.
PF
XX
PR
     10-APR-2001; 2001US-0282739P.
     10-APR-2001; 2001US-0283112P.
PR
     25-APR-2001; 2001US-0286630P.
PR
XX
PΑ
     (AGEN-) AGENSYS INC.
XX
     Jakobovits A, Challita-Eid PM, Faris M, Ge W, Hubert RS;
PΙ
PΙ
     Morrison K, Morrison RK, Raitano AB;
XX
DR
     WPI; 2003-075555/07.
XX
PΤ
     New composition comprising a substance that modulates the structure of
PT
     proteins and polynucleotides, useful for therapeutic, prognostic and
     diagnostic reagents for eliciting cellular or humoral immune response in
PΤ
PT
     cancer patients.
XX
PS
     Claim 13; Page 469; 1021pp; English.
XX
CC
     The present invention relates to novel human cancer-related genes and
     proteins (ABZ78120-ABZ78168 and ABR01789-ABR01861). The genes and
CC
     proteins are useful for eliciting a humoral or cellular immune response.
CC
CC
     The genes are useful as probes and primers for the amplification and/or
CC
     detection of genes, mRNAs or their fragments, as reagents for the
     diagnosis and/or prognosis of cancer, as coding sequences capable of
CC
     directing the expression of the protein, as tools for modulating or
CC
     inhibiting the expression of genes and/or translation of transcripts, and
CC
     as therapeutic agents. The proteins and peptides are useful as
CC
     therapeutic, prognostic and diagnostic reagents for cancer. The present
CC
CC
     sequence is a human leukocyte antigen (HLA) peptide, used in an example
CC
     from the invention
XX
SQ
     Sequence 15 AA;
                          68.8%;
                                  Score 33; DB 6; Length 15;
  Query Match
                                 Pred. No. 26;
                          66.78;
  Best Local Similarity
                                 0; Mismatches
                                                                  0; Gaps
                                                                              0;
             6; Conservative
                                                   3; Indels
Qу
```

```
RESULT 22
ABR29962
     ABR29962 standard; peptide; 15 AA.
TD
XX
AC
     ABR29962;
XX
DT
     19-MAY-2003 (first entry)
XX
     Human cancer-related protein 74P3B3 HLA peptide #2806.
DΕ
XX
KW
     Human; cytostatic; vaccine; cancer; immune response; HLA;
     human leukocyte antigen.
KW
XX
OS
     Homo sapiens.
XX
     WO200283921-A2.
PN
XX
PD
     24-OCT-2002.
XX
     10-APR-2002; 2002WO-US011654.
PF
XX
PR
     10-APR-2001; 2001US-0282739P.
     10-APR-2001; 2001US-0283112P.
PR
     25-APR-2001; 2001US-0286630P.
PR
XX
PΑ
     (AGEN-) AGENSYS INC.
XX
     Jakobovits A, Challita-Eid PM, Faris M,
                                                Ge W, Hubert RS;
PI
     Morrison K, Morrison RK, Raitano AB;
PΙ
XX
DR
     WPI; 2003-075555/07.
XX
PT
     New composition comprising a substance that modulates the structure of
PT
     proteins and polynucleotides, useful for therapeutic, prognostic and
     diagnostic reagents for eliciting cellular or humoral immune response in
PT
PT
     cancer patients.
XX
PS
     Claim 13; Page 466; 1021pp; English.
XX
     The present invention relates to novel human cancer-related genes and
CC
     proteins (ABZ78120-ABZ78168 and ABR01789-ABR01861). The genes and
CC
     proteins are useful for eliciting a humoral or cellular immune response.
CC
     The genes are useful as probes and primers for the amplification and/or
CC
     detection of genes, mRNAs or their fragments, as reagents for the
CC
     diagnosis and/or prognosis of cancer, as coding sequences capable of
CC
     directing the expression of the protein, as tools for modulating or
CC
     inhibiting the expression of genes and/or translation of transcripts, and
CC
     as therapeutic agents. The proteins and peptides are useful as
CC
     therapeutic, prognostic and diagnostic reagents for cancer. The present
CC
     sequence is a human leukocyte antigen (HLA) peptide, used in an example
CC
CC
     from the invention
XX
SQ
     Sequence 15 AA;
```

```
Query Match
                          68.8%; Score 33; DB 6; Length 15;
                         66.7%; Pred. No. 26;
 Best Local Similarity
 Matches
            6; Conservative
                                0; Mismatches
                                                   3; Indels
                                                                 0; Gaps
                                                                             0;
           1 VESYVPLFP 9
Qу
              7 VEQYCPWFP 15
RESULT 23
ABR30102
ID
    ABR30102 standard; peptide; 15 AA.
XX
AC
    ABR30102;
XX
DT
    19-MAY-2003 (first entry)
XX
DΕ
    Human cancer-related protein 74P3B3 HLA peptide #2946.
XX
KW
    Human; cytostatic; vaccine; cancer; immune response; HLA;
KW
    human leukocyte antigen.
XX
OS
    Homo sapiens.
XX
PN
    WO200283921-A2.
XX
PD
     24-OCT-2002.
XX
PF
    10-APR-2002; 2002WO-US011654.
XX
PR
     10-APR-2001; 2001US-0282739P.
     10-APR-2001; 2001US-0283112P.
PR
     25-APR-2001; 2001US-0286630P.
PR
XX
PA
     (AGEN-) AGENSYS INC.
XX
     Jakobovits A, Challita-Eid PM, Faris M, Ge W, Hubert RS;
PΙ
PI
    Morrison K, Morrison RK, Raitano AB;
XX
DR
     WPI; 2003-075555/07.
XX
    New composition comprising a substance that modulates the structure of
PT
     proteins and polynucleotides, useful for therapeutic, prognostic and
PT
PT
     diagnostic reagents for eliciting cellular or humoral immune response in
PT
     cancer patients.
XX
PS
     Claim 13; Page 468; 1021pp; English.
XX
CC
     The present invention relates to novel human cancer-related genes and
CC
     proteins (ABZ78120-ABZ78168 and ABR01789-ABR01861). The genes and
     proteins are useful for eliciting a humoral or cellular immune response.
CC
CC
     The genes are useful as probes and primers for the amplification and/or
CC
     detection of genes, mRNAs or their fragments, as reagents for the
     diagnosis and/or prognosis of cancer, as coding sequences capable of
CC
CC
     directing the expression of the protein, as tools for modulating or
     inhibiting the expression of genes and/or translation of transcripts, and
CC
     as therapeutic agents. The proteins and peptides are useful as
CC
```

```
therapeutic, prognostic and diagnostic reagents for cancer. The present
CC
CC
     sequence is a human leukocyte antigen (HLA) peptide, used in an example
     from the invention
CC
XX
SQ
     Sequence 15 AA;
  Query Match
                          68.8%; Score 33; DB 6; Length 15;
  Best Local Similarity
                          66.7%; Pred. No. 26;
  Matches
            6; Conservative
                                 0; Mismatches
                                                                  0; Gaps
                                                                              0;
                                                   3; Indels
Qу
            1 VESYVPLFP 9
              +1 + + +
Db
            7 VEQYCPWFP 15
RESULT 24
ABR30015
ID
     ABR30015 standard; peptide; 15 AA.
XX
     ABR30015;
AC
XX
DT
     19-MAY-2003 (first entry)
XX
     Human cancer-related protein 74P3B3 HLA peptide #2859.
DE
XX
KW
     Human; cytostatic; vaccine; cancer; immune response; HLA;
KW
     human leukocyte antigen.
XX
OS
     Homo sapiens.
XX
PN
     WO200283921-A2.
XX
PD
     24-OCT-2002.
XX
PF
     10-APR-2002; 2002WO-US011654.
XX
PR
     10-APR-2001; 2001US-0282739P.
PR
     10-APR-2001; 2001US-0283112P.
PR
     25-APR-2001; 2001US-0286630P.
XX
PA
     (AGEN-) AGENSYS INC.
XX
PI
     Jakobovits A, Challita-Eid PM, Faris M, Ge W, Hubert RS;
PI
     Morrison K, Morrison RK, Raitano AB;
XX
DR
     WPI; 2003-075555/07.
XX
PT
     New composition comprising a substance that modulates the structure of
     proteins and polynucleotides, useful for therapeutic, prognostic and
PT
PΤ
     diagnostic reagents for eliciting cellular or humoral immune response in
PT
     cancer patients.
XX
PS
     Claim 13; Page 467; 1021pp; English.
XX
CC
     The present invention relates to novel human cancer-related genes and
CC
     proteins (ABZ78120-ABZ78168 and ABR01789-ABR01861). The genes and
CC
     proteins are useful for eliciting a humoral or cellular immune response.
```

```
CC
    The genes are useful as probes and primers for the amplification and/or
    detection of genes, mRNAs or their fragments, as reagents for the
CC
CC
    diagnosis and/or prognosis of cancer, as coding sequences capable of
    directing the expression of the protein, as tools for modulating or
CC
     inhibiting the expression of genes and/or translation of transcripts, and
CC
     as therapeutic agents. The proteins and peptides are useful as
CC
     therapeutic, prognostic and diagnostic reagents for cancer. The present
CC
CC
     sequence is a human leukocyte antigen (HLA) peptide, used in an example
CC
     from the invention
XX
SQ
     Sequence 15 AA;
  Query Match
                          68.8%; Score 33; DB 6; Length 15;
  Best Local Similarity
                          66.7%; Pred. No. 26;
 Matches
            6; Conservative 0; Mismatches
                                                   3; Indels
                                                                 0; Gaps
                                                                              0;
            1 VESYVPLFP 9
Qу
              +1 +1
            5 VEQYCPWFP 13
Db
RESULT 25
ABR30048
    ABR30048 standard; peptide; 15 AA.
XX
AC
    ABR30048;
XX
DT
     19-MAY-2003 (first entry)
XX
DE
     Human cancer-related protein 74P3B3 HLA peptide #2892.
XX
     Human; cytostatic; vaccine; cancer; immune response; HLA;
KW
     human leukocyte antigen.
KW
XX
OS
     Homo sapiens.
XX
PN
     WO200283921-A2.
XX
PD
     24-OCT-2002.
XX
PF
     10-APR-2002; 2002WO-US011654.
XX
     10-APR-2001; 2001US-0282739P.
PR
     10-APR-2001; 2001US-0283112P.
PR
     25-APR-2001; 2001US-0286630P.
PR
XX
PΑ
     (AGEN-) AGENSYS INC.
XX
ΡI
     Jakobovits A, Challita-Eid PM, Faris M, Ge W, Hubert RS;
     Morrison K, Morrison RK, Raitano AB;
ΡI
XX
     WPI; 2003-075555/07.
DR
XX
     New composition comprising a substance that modulates the structure of
PT
     proteins and polynucleotides, useful for therapeutic, prognostic and
PT
     diagnostic reagents for eliciting cellular or humoral immune response in
PT
     cancer patients.
PT
```

```
XX
     Claim 13; Page 467; 1021pp; English.
PS
XX
     The present invention relates to novel human cancer-related genes and
CC
     proteins (ABZ78120-ABZ78168 and ABR01789-ABR01861). The genes and
CC
     proteins are useful for eliciting a humoral or cellular immune response.
CC
     The genes are useful as probes and primers for the amplification and/or
CC
     detection of genes, mRNAs or their fragments, as reagents for the
CC
     diagnosis and/or prognosis of cancer, as coding sequences capable of
CC
     directing the expression of the protein, as tools for modulating or
CC
CC
     inhibiting the expression of genes and/or translation of transcripts, and
CC
     as therapeutic agents. The proteins and peptides are useful as
     therapeutic, prognostic and diagnostic reagents for cancer. The present
CC
CC
     sequence is a human leukocyte antigen (HLA) peptide, used in an example
CC
     from the invention
XX
     Sequence 15 AA;
SQ
                          68.8%;
                                  Score 33; DB 6; Length 15;
  Query Match
  Best Local Similarity
                          66.7%; Pred. No. 26;
                                                                              0;
            6; Conservative
                                 0; Mismatches
                                                   3; Indels
                                                                  0; Gaps
  Matches
            1 VESYVPLFP 9
Qу
              11-1-11
Db
            7 VEOYCPWFP 15
RESULT 26
ABR29971
ID
     ABR29971 standard; peptide; 15 AA.
XX
AC
    ABR29971;
XX
DT
     19-MAY-2003 (first entry)
XX
     Human cancer-related protein 74P3B3 HLA peptide #2815.
DE
XX
     Human; cytostatic; vaccine; cancer; immune response; HLA;
KW
KW
     human leukocyte antigen.
XX
     Homo sapiens.
OS
XX
PN
     WO200283921-A2.
XX
PD
     24-OCT-2002.
XX
     10-APR-2002; 2002WO-US011654.
PF
XX
     10-APR-2001; 2001US-0282739P.
PR
     10-APR-2001; 2001US-0283112P.
PR
     25-APR-2001; 2001US-0286630P.
PR
XX
PA
     (AGEN-) AGENSYS INC.
XX
     Jakobovits A, Challita-Eid PM, Faris M, Ge W, Hubert RS;
PΙ
PΙ
     Morrison K, Morrison RK, Raitano AB;
XX
```

```
WPI; 2003-075555/07.
DR
XX
    New composition comprising a substance that modulates the structure of
тq
    proteins and polynucleotides, useful for therapeutic, prognostic and
PT
    diagnostic reagents for eliciting cellular or humoral immune response in
PT
    cancer patients.
PT
XX
    Claim 13; Page 466; 1021pp; English.
ΡS
XX
CC
    The present invention relates to novel human cancer-related genes and
CC
    proteins (ABZ78120-ABZ78168 and ABR01789-ABR01861). The genes and
    proteins are useful for eliciting a humoral or cellular immune response.
CC
    The genes are useful as probes and primers for the amplification and/or
CC
    detection of genes, mRNAs or their fragments, as reagents for the
CC
CC
    diagnosis and/or prognosis of cancer, as coding sequences capable of
    directing the expression of the protein, as tools for modulating or
CC
     inhibiting the expression of genes and/or translation of transcripts, and
CC
     as therapeutic agents. The proteins and peptides are useful as
CC
     therapeutic, prognostic and diagnostic reagents for cancer. The present
CC
     sequence is a human leukocyte antigen (HLA) peptide, used in an example
CC
CC
     from the invention
XX
    Sequence 15 AA;
SQ
                          68.8%; Score 33; DB 6; Length 15;
  Query Match
                                 Pred. No. 26;
  Best Local Similarity
                          66.7%;
                                 0; Mismatches
  Matches
             6; Conservative
                                                   3; Indels
                                                                  0;
                                                                      Gaps
                                                                              0;
            1 VESYVPLFP 9
Qy
              11 1 1 11
Db
            4 VEQYCPWFP 12
RESULT 27
ABR30004
ID
    ABR30004 standard; peptide; 15 AA.
XX
AC
     ABR30004;
XX
DT
     19-MAY-2003 (first entry)
XX
     Human cancer-related protein 74P3B3 HLA peptide #2848.
DΕ
XX
     Human; cytostatic; vaccine; cancer; immune response; HLA;
KW
KW
     human leukocyte antigen.
XX
OS
     Homo sapiens.
XX
PN
     WO200283921-A2.
XX
     24-OCT-2002.
PD
XX
     10-APR-2002; 2002WO-US011654.
PF
XX
     10-APR-2001; 2001US-0282739P.
PR
     10-APR-2001; 2001US-0283112P.
PR
     25-APR-2001; 2001US-0286630P.
PR
```

```
XX
PΆ
     (AGEN-) AGENSYS INC.
XX
     Jakobovits A, Challita-Eid PM, Faris M, Ge W, Hubert RS;
PI
PΙ
     Morrison K, Morrison RK,
                               Raitano AB;
XX
     WPI; 2003-075555/07.
DR
XX
     New composition comprising a substance that modulates the structure of
PT
     proteins and polynucleotides, useful for therapeutic, prognostic and
PT
     diagnostic reagents for eliciting cellular or humoral immune response in
PT
PT
     cancer patients.
XX
     Claim 13; Page 466; 1021pp; English.
PS
XX
     The present invention relates to novel human cancer-related genes and
CC
     proteins (ABZ78120-ABZ78168 and ABR01789-ABR01861). The genes and
CC
     proteins are useful for eliciting a humoral or cellular immune response.
CC
     The genes are useful as probes and primers for the amplification and/or
CC
     detection of genes, mRNAs or their fragments, as reagents for the
CC
     diagnosis and/or prognosis of cancer, as coding sequences capable of
CC
     directing the expression of the protein, as tools for modulating or
CC
     inhibiting the expression of genes and/or translation of transcripts, and
CC
     as therapeutic agents. The proteins and peptides are useful as
CC
     therapeutic, prognostic and diagnostic reagents for cancer. The present
CC
     sequence is a human leukocyte antigen (HLA) peptide, used in an example
CC
     from the invention
CC
XX
SO
     Sequence 15 AA;
                          68.8%; Score 33; DB 6; Length 15;
  Query Match
                          66.7%; Pred. No. 26;
  Best Local Similarity
             6; Conservative
                                 0; Mismatches
                                                   3; Indels
                                                                 0;
                                                                     Gaps
                                                                              0:
            1 VESYVPLFP 9
Qγ
              Db
            1 VEQYCPWFP 9
RESULT 28
ABP46252
ID
     ABP46252 standard; peptide; 16 AA.
XX
AC
     ABP46252;
XX
DT
     19-AUG-2002 (first entry)
XX
DE
     Human BLyS binding scFv VH CDR3 SEQ ID 2263.
XX
KW
     BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW
     tumour necrosis factor; B cell proliferation; B cell differentiation;
     immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW
     antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW
     systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
KW
KW
     common variable immunodeficiency; acquired immunodeficiency syndrome.
XX
os
     Homo sapiens.
```

```
XX
    WO200202641-A1.
PN
XX
     10-JAN-2002.
PD
XX
     15-JUN-2001; 2001WO-US019110.
PF
XX
     16-JUN-2000; 2000US-0212210P.
PR
     17-OCT-2000; 2000US-0240816P.
PR
PR
     16-MAR-2001; 2001US-0276248P.
     21-MAR-2001; 2001US-0277379P.
PR
     25-MAY-2001; 2001US-0293499P.
PR
XX
PΑ
     (HUMA-) HUMAN GENOME SCI INC.
     (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
PΑ
XX
     Ruben SM, Barash SC, Choi GH, Vaughan T, Hilbert D;
PΙ
XX
    WPI; 2002-114799/15.
DR
XX
     Antibodies against B Lymphocyte Stimulating polypeptides, useful for the
PT
     diagnosis and treatment of cancers and immune disorders.
PT
XX
     Claim 2; Page 2960; 3148pp; English.
PS
XX
     This invention describes novel antibodies that immunospecifically bind to
CC
     B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC
     tumour necrosis factor (TNF) super family and induces B cell
CC
CC
     proliferation and differentiation. The antibodies of the invention have
     cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC
CC
     antirheumatic and antiAIDS activity and can be used in vaccines to
CC
     inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC
     and so may be used to detect and quantitate the presence of BLyS in
CC
     biological samples and may be used in this way to diagnose disease
CC
     associated with aberrant expression of BLyS. They may also be
CC
     administered to treat diseases associated with aberrant BLyS expression
CC
     and activity such as cancer, immune, and autoimmune disorders and
CC
     diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
     immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC
CC
     acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC
     the antibodies and fragments of the antibodies described in the method of
CC
     the invention
XX
SQ
     Sequence 16 AA;
  Query Match
                          68.8%; Score 33; DB 5; Length 16;
  Best Local Similarity
                          85.7%; Pred. No. 28;
             6; Conservative
                                 0; Mismatches
                                                                              0;
  Matches
                                                   1; Indels
                                                                  0; Gaps
Qy
            3 SYVPLFP 9
              +1111111
Db
            8 SYVPLLP 14
RESULT 29
```

RESULT 29
ABR02132
ID ABR02132 standard; peptide; 9 AA.

```
XX
     ABR02132;
AC
XX
     19-MAY-2003 (first entry)
DT
XX
     Human cancer-related protein 74P3B3 HLA peptide #267.
DE
XX
     Human; cytostatic; vaccine; cancer; immune response; HLA;
KW
     human leukocyte antigen.
KW
XX
     Homo sapiens.
OS
XX
     WO200283921-A2.
PN
XX
     24-OCT-2002.
PD
XX
     10-APR-2002; 2002WO-US011654.
PF
XX
     10-APR-2001; 2001US-0282739P.
PR
     10-APR-2001; 2001US-0283112P.
PR
     25-APR-2001; 2001US-0286630P.
PR
XX
     (AGEN-) AGENSYS INC.
PA
XX
     Jakobovits A, Challita-Eid PM, Faris M, Ge W, Hubert RS;
PΙ
PΤ
     Morrison K, Morrison RK, Raitano AB;
XX
     WPI; 2003-075555/07.
DR
XX
     New composition comprising a substance that modulates the structure of
PT
     proteins and polynucleotides, useful for therapeutic, prognostic and
PT
     diagnostic reagents for eliciting cellular or humoral immune response in
PT
PT
     cancer patients.
XX
PS
     Claim 13; Page 133; 1021pp; English.
XX
CC
     The present invention relates to novel human cancer-related genes and
CC
     proteins (ABZ78120-ABZ78168 and ABR01789-ABR01861). The genes and
     proteins are useful for eliciting a humoral or cellular immune response.
CC
     The genes are useful as probes and primers for the amplification and/or
CC
     detection of genes, mRNAs or their fragments, as reagents for the
CC
CC
     diagnosis and/or prognosis of cancer, as coding sequences capable of
     directing the expression of the protein, as tools for modulating or
CC
     inhibiting the expression of genes and/or translation of transcripts, and
CC
     as therapeutic agents. The proteins and peptides are useful as
CC
CC
     therapeutic, prognostic and diagnostic reagents for cancer. The present
     sequence is a human leukocyte antigen (HLA) peptide, used in an example
CC
CC
     from the invention
XX
SO
     Sequence 9 AA;
  Query Match
                          60.4%; Score 29; DB 6; Length 9;
  Best Local Similarity
                          62.5%; Pred. No. 1.4e+06;
                              0; Mismatches
            5: Conservative
                                                   3; Indels
                                                                 0; Gaps
Qу
            2 ESYVPLFP 9
```

```
RESULT 30
ABR02528
     ABR02528 standard; peptide; 9 AA.
TD
XX
AC
     ABR02528;
XX
     19-MAY-2003
                  (first entry)
DT
XX
     Human cancer-related protein 74P3B3 HLA peptide #663.
DE
XX
     Human; cytostatic; vaccine; cancer; immune response; HLA;
KW
KW
     human leukocyte antigen.
XX
OS
     Homo sapiens.
XX
     WO200283921-A2.
PN
XX
     24-OCT-2002.
PD
XX
     10-APR-2002; 2002WO-US011654.
PF
XX
     10-APR-2001; 2001US-0282739P.
PR
     10-APR-2001; 2001US-0283112P.
PR
PR
     25-APR-2001; 2001US-0286630P.
XX
PΑ
     (AGEN-) AGENSYS INC.
XX
     Jakobovits A, Challita-Eid PM, Faris M, Ge W, Hubert RS;
PΙ
PΙ
     Morrison K, Morrison RK, Raitano AB;
XX
DR
     WPI; 2003-075555/07.
XX
     New composition comprising a substance that modulates the structure of
PT
     proteins and polynucleotides, useful for therapeutic, prognostic and
PΤ
PΤ
     diagnostic reagents for eliciting cellular or humoral immune response in
PT
     cancer patients.
XX
PS
     Claim 13; Page 137; 1021pp; English.
XX
CC
     The present invention relates to novel human cancer-related genes and
     proteins (ABZ78120-ABZ78168 and ABR01789-ABR01861). The genes and
CC
     proteins are useful for eliciting a humoral or cellular immune response.
CC
CC
     The genes are useful as probes and primers for the amplification and/or
CC
     detection of genes, mRNAs or their fragments, as reagents for the
     diagnosis and/or prognosis of cancer, as coding sequences capable of
CC
     directing the expression of the protein, as tools for modulating or
CC
CC
     inhibiting the expression of genes and/or translation of transcripts, and
     as therapeutic agents. The proteins and peptides are useful as
CC
     therapeutic, prognostic and diagnostic reagents for cancer. The present
CC
CC
     sequence is a human leukocyte antigen (HLA) peptide, used in an example
CÇ
     from the invention
XX
SQ
     Sequence 9 AA;
```

```
Query Match
                          60.4%; Score 29; DB 6; Length 9;
                          62.5%; Pred. No. 1.4e+06;
  Best Local Similarity
                                                                              0;
 Matches
             5; Conservative
                                 0; Mismatches
                                                                  0; Gaps
                                                   3; Indels
            2 ESYVPLFP 9
Qу
              1 1 1 11
            1 EQYCPWFP 8
Db
RESULT 31
ABR02946
     ABR02946 standard; peptide; 9 AA.
XX
AC
    ABR02946;
XX
DT
     19-MAY-2003 (first entry)
XX
     Human cancer-related protein 74P3B3 HLA peptide #1081.
DE
XX
ΚW
     Human; cytostatic; vaccine; cancer; immune response; HLA;
KW
     human leukocyte antigen.
XX
     Homo sapiens.
OS
XX
     WO200283921-A2.
PN
XX
PD
     24-OCT-2002.
XX
     10-APR-2002; 2002WO-US011654.
PF
XX
     10-APR-2001; 2001US-0282739P.
PR
     10-APR-2001; 2001US-0283112P.
PR
PR
     25-APR-2001; 2001US-0286630P.
XX
PΑ
     (AGEN-) AGENSYS INC.
XX
PΙ
     Jakobovits A, Challita-Eid PM, Faris M,
                                                Ge W,
                                                       Hubert RS;
PΙ
     Morrison K, Morrison RK,
                               Raitano AB;
XX
DR
     WPI; 2003-075555/07.
XX
PT
     New composition comprising a substance that modulates the structure of
PT
     proteins and polynucleotides, useful for therapeutic, prognostic and
PT
     diagnostic reagents for eliciting cellular or humoral immune response in
PT
     cancer patients.
XX
PS
     Claim 13; Page 141; 1021pp; English.
XX
CC
     The present invention relates to novel human cancer-related genes and
CC
     proteins (ABZ78120-ABZ78168 and ABR01789-ABR01861). The genes and
CC
     proteins are useful for eliciting a humoral or cellular immune response.
CC
     The genes are useful as probes and primers for the amplification and/or
CC
     detection of genes, mRNAs or their fragments, as reagents for the
CC
     diagnosis and/or prognosis of cancer, as coding sequences capable of
CC
     directing the expression of the protein, as tools for modulating or
CC
     inhibiting the expression of genes and/or translation of transcripts, and
CC
     as therapeutic agents. The proteins and peptides are useful as
```

```
therapeutic, prognostic and diagnostic reagents for cancer. The present
CC
     sequence is a human leukocyte antigen (HLA) peptide, used in an example
CC
     from the invention
CC
XX
     Sequence 9 AA;
SQ
                          60.4%; Score 29; DB 6; Length 9;
  Query Match
                          62.5%; Pred. No. 1.4e+06;
  Best Local Similarity
                                                                              0;
             5; Conservative 0; Mismatches
                                                   3; Indels
                                                                  0; Gaps
  Matches
            2 ESYVPLFP 9
Qу
              I I I I I I I
            1 EQYCPWFP 8
Db
RESULT 32
ABR02332
     ABR02332 standard; peptide; 9 AA.
ID
XX
AC.
     ABR02332;
XX
     19-MAY-2003 (first entry)
DT
XX
     Human cancer-related protein 74P3B3 HLA peptide #467.
DE
XX
     Human; cytostatic; vaccine; cancer; immune response; HLA;
KW
KW
     human leukocyte antigen.
XX
     Homo sapiens.
OS
XX
     WO200283921-A2.
PN
XX
     24-OCT-2002.
PD
XX
     10-APR-2002; 2002WO-US011654.
PF
XX
     10-APR-2001; 2001US-0282739P.
PR
PR
     10-APR-2001; 2001US-0283112P.
     25-APR-2001; 2001US-0286630P.
PR
XX
PΑ
     (AGEN-) AGENSYS INC.
XX
PI
     Jakobovits A, Challita-Eid PM, Faris M,
                                                Ge W, Hubert RS;
     Morrison K, Morrison RK, Raitano AB;
PI
XX
DR
     WPI; 2003-075555/07.
XX
     New composition comprising a substance that modulates the structure of
PT
     proteins and polynucleotides, useful for therapeutic, prognostic and
PT
PΤ
     diagnostic reagents for eliciting cellular or humoral immune response in
PT
     cancer patients.
XX
     Claim 13; Page 135; 1021pp; English.
PS
XX
CC
     The present invention relates to novel human cancer-related genes and
CC
     proteins (ABZ78120-ABZ78168 and ABR01789-ABR01861). The genes and
CC
     proteins are useful for eliciting a humoral or cellular immune response.
```

```
The genes are useful as probes and primers for the amplification and/or
CC
    detection of genes, mRNAs or their fragments, as reagents for the
CC
    diagnosis and/or prognosis of cancer, as coding sequences capable of
CC
    directing the expression of the protein, as tools for modulating or
CC
CC
    inhibiting the expression of genes and/or translation of transcripts, and
    as therapeutic agents. The proteins and peptides are useful as
CC
    therapeutic, prognostic and diagnostic reagents for cancer. The present
CC
     sequence is a human leukocyte antigen (HLA) peptide, used in an example
CC
CC
     from the invention
XX
SQ
     Sequence 9 AA;
                          60.4%;
                                  Score 29; DB 6; Length 9;
  Query Match
                          62.5%; Pred. No. 1.4e+06;
  Best Local Similarity
                                                                              0;
            5; Conservative 0; Mismatches 3; Indels
                                                                 0; Gaps
 Matches
            2 ESYVPLFP 9
Qy
              1 1 1 11
            1 EQYCPWFP 8
RESULT 33
AAU82797
     AAU82797 standard; peptide; 10 AA.
ID
XX
AC
    AAU82797;
XX
DT
     23-APR-2002 (first entry)
XX
DE
     Human Calcitonin targeted peptide #3.
XX
KW
     Dopamine D2DA; receptor; muscarinic M1; nerve growth factor; calcitonin;
     human; retro-inverso peptide; physicochemical mode;
KW
KW
     protein-targeted peptide.
XX
OS
     Homo sapiens.
     Synthetic.
OS
XX
     US2002009756-A1.
PN
XX
PD
     24-JAN-2002.
XX
PF
     23-JAN-2001; 2001US-00767460.
XX
PR
     24-JAN-2000; 2000US-00490702.
XX
PΑ
     (MAND/) MANDELL A J.
     (SELZ/) SELZ K A.
PA
PΑ
     (SHLE/) SHLESINGER M F.
XX
PΙ
     Mandell AJ, Selz KA, Shlesinger MF;
XX
     WPI; 2002-163853/21.
DR
XX
PT
     Synthesizing peptides based on matching a physicochemical mode of a
PT
     peptide to the same physicochemical mode of a target polypeptide or
PT
     protein.
```

```
Example 3; Page 24; 33pp; English.
PS
XX
     The invention relates to a method for synthesising a peptide based on
CC
CC
     matching a physicochemical mode of a peptide to the same physicochemical
     mode of a target polypeptide or protein, followed by synthesising a retro
CC
     -inverso peptide version of the peptide comprised of D-amino acids. The
CC
     method is used for designing protein-targeted peptides or peptide
CC
     analogues whose sequences are derived from the target protein sequences
CC
     using target protein sequence, analytically derived templates, and
CC
     relevant distributions of amino acids for weighted random assignments to
CC
     those templates. The protein targets include cell receptors,
CC
     transporters, enzymes, chaperonins, antibodies, surface proteins of
CC
     infectious agents, and any protein involved in protein-protein
CC
     interactions. The method provides an entirely new way of designing
CC
     peptides or peptide analogue molecules capable of binding to and/or
CC
     otherwise modulating the function of protein targets having known amino
CC
     acid sequences. The methods employ three kinds of templates, derived from
CC
     analyses of the target protein sequences, in addition to relevant
CC
     distributions of amino acids, for weighted and constrained random
CC
     assignments to the templates to produce the peptides. The present
CC
     sequence is a peptide derived by the method of the invention targeting
CC
     either the human dopamine D2DA receptor, muscarinic M1 receptor, nerve
CC
CC
     growth factor receptor or calcitonin
XX
     Sequence 10 AA;
SQ
                                  Score 29; DB 5; Length 10;
  Query Match
                          60.4%;
                          55.6%;
                                  Pred. No. 95;
  Best Local Similarity
                                                                              0;
  Matches
             5; Conservative
                                 2; Mismatches
                                                   2; Indels
                                                                      Gaps
            1 VESYVPLFP 9
Qу
              1::1 | ||
            1 VQTYPPHFP 9
Db
RESULT 34
ABR02235
     ABR02235 standard; peptide; 10 AA.
XX
AC
     ABR02235;
XX
DT
     19-MAY-2003 (first entry)
XX
DΕ
     Human cancer-related protein 74P3B3 HLA peptide #370.
XX
KW
     Human; cytostatic; vaccine; cancer; immune response; HLA;
KW
     human leukocyte antigen.
XX
OS
     Homo sapiens.
XX
PN
     WO200283921-A2.
XX
PD
     24-OCT-2002.
XX
PF
     10-APR-2002; 2002WO-US011654.
XX
```

XX

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10-APR-2001; 2001US-0282739P.
PR
     10-APR-2001; 2001US-0283112P.
PR
     25-APR-2001; 2001US-0286630P.
PR
XX
     (AGEN-) AGENSYS INC.
PA
XX
     Jakobovits A, Challita-Eid PM, Faris M, Ge W, Hubert RS;
PΙ
     Morrison K, Morrison RK, Raitano AB;
PΙ
XX
     WPI; 2003-075555/07.
DR
XX
     New composition comprising a substance that modulates the structure of
PT
     proteins and polynucleotides, useful for therapeutic, prognostic and
PT
     diagnostic reagents for eliciting cellular or humoral immune response in
PT
PT
     cancer patients.
XX
     Claim 13; Page 134; 1021pp; English.
PS
XX
     The present invention relates to novel human cancer-related genes and
CC
     proteins (ABZ78120-ABZ78168 and ABR01789-ABR01861). The genes and
CC
     proteins are useful for eliciting a humoral or cellular immune response.
CC
     The genes are useful as probes and primers for the amplification and/or
CC
     detection of genes, mRNAs or their fragments, as reagents for the
CC
     diagnosis and/or prognosis of cancer, as coding sequences capable of
CC,
     directing the expression of the protein, as tools for modulating or
CC
     inhibiting the expression of genes and/or translation of transcripts, and
CC
     as therapeutic agents. The proteins and peptides are useful as
CC
     therapeutic, prognostic and diagnostic reagents for cancer. The present
CC
     sequence is a human leukocyte antigen (HLA) peptide, used in an example
CC
CC
     from the invention
XX
SQ
     Sequence 10 AA;
                          60.4%; Score 29; DB 6; Length 10;
  Query Match
                          62.5%; Pred. No. 95;
  Best Local Similarity
                                                    3; Indels
                                                                  0; Gaps
                                                                              0;
  Matches
            5; Conservative
                                0; Mismatches
            2 ESYVPLFP 9
Qу
              \perp \perp \perp \perp
            1 EQYCPWFP 8
Db
RESULT 35
ABR02609
     ABR02609 standard; peptide; 10 AA.
ΙD
XX
AC
     ABR02609;
XX
DT
     19-MAY-2003 (first entry)
XX
     Human cancer-related protein 74P3B3 HLA peptide #744.
DE
XX
     Human; cytostatic; vaccine; cancer; immune response; HLA;
KW
     human leukocyte antigen.
KW
XX
OS
     Homo sapiens.
XX
```

```
WO200283921-A2.
PN
XX
     24-OCT-2002.
PD
XX
     10-APR-2002; 2002WO-US011654.
PF
XX
     10-APR-2001; 2001US-0282739P.
PR
     10-APR-2001; 2001US-0283112P.
PR
     25-APR-2001; 2001US-0286630P.
PR
XX
PA
     (AGEN-) AGENSYS INC.
XX
     Jakobovits A, Challita-Eid PM, Faris M, Ge W, Hubert RS;
PI
     Morrison K, Morrison RK, Raitano AB;
PI
XX
     WPI; 2003-075555/07.
DR
XX
     New composition comprising a substance that modulates the structure of
PT
     proteins and polynucleotides, useful for therapeutic, prognostic and
PT
     diagnostic reagents for eliciting cellular or humoral immune response in
PΤ
     cancer patients.
PT
XX
     Claim 13; Page 138; 1021pp; English.
PS
XX
     The present invention relates to novel human cancer-related genes and
CC
     proteins (ABZ78120-ABZ78168 and ABR01789-ABR01861). The genes and
CC
     proteins are useful for eliciting a humoral or cellular immune response.
CC
CC
     The genes are useful as probes and primers for the amplification and/or
     detection of genes, mRNAs or their fragments, as reagents for the
CC
CC
     diagnosis and/or prognosis of cancer, as coding sequences capable of
CC
     directing the expression of the protein, as tools for modulating or
CC
     inhibiting the expression of genes and/or translation of transcripts, and
     as therapeutic agents. The proteins and peptides are useful as
CC
     therapeutic, prognostic and diagnostic reagents for cancer. The present
CC
     sequence is a human leukocyte antigen (HLA) peptide, used in an example
CC
CC
     from the invention
XX
SQ
     Sequence 10 AA;
                          60.4%; Score 29; DB 6; Length 10;
  Query Match
  Best Local Similarity
                          62.5%; Pred. No. 95;
  Matches
            5; Conservative 0; Mismatches
                                                   3; Indels
                                                                 0; Gaps
            2 ESYVPLFP 9
Qy
              1 1 1 11
Db
            1 EQYCPWFP 8
RESULT 36
ABR02053
     ABR02053 standard; peptide; 10 AA.
TD
XX
AC
     ABR02053;
XX
DT
     19-MAY-2003 (first entry)
XX
DE
     Human cancer-related protein 74P3B3 HLA peptide #188.
```

```
XX
     Human; cytostatic; vaccine; cancer; immune response; HLA;
KW
KW
     human leukocyte antigen.
XX
OS
     Homo sapiens.
XX
     WO200283921-A2.
PN
XX
PD
     24-OCT-2002.
XX
     10-APR-2002; 2002WO-US011654.
PF
XX
     10-APR-2001; 2001US-0282739P.
PR
     10-APR-2001; 2001US-0283112P.
PR
     25-APR-2001; 2001US-0286630P.
PR
XX
PΑ
     (AGEN-) AGENSYS INC.
XX
     Jakobovits A, Challita-Eid PM, Faris M, Ge W, Hubert RS;
PΙ
     Morrison K, Morrison RK, Raitano AB;
PΙ
XX
     WPI; 2003-075555/07.
DR
XX
     New composition comprising a substance that modulates the structure of
PT
     proteins and polynucleotides, useful for therapeutic, prognostic and
РΨ
     diagnostic reagents for eliciting cellular or humoral immune response in
PT
PT
     cancer patients.
XX
     Claim 13; Page 132; 1021pp; English.
PS
XX
CC
     The present invention relates to novel human cancer-related genes and
     proteins (ABZ78120-ABZ78168 and ABR01789-ABR01861). The genes and
CC
CC
     proteins are useful for eliciting a humoral or cellular immune response.
CC
     The genes are useful as probes and primers for the amplification and/or
CC
     detection of genes, mRNAs or their fragments, as reagents for the
CC
     diagnosis and/or prognosis of cancer, as coding sequences capable of
CC
     directing the expression of the protein, as tools for modulating or
     inhibiting the expression of genes and/or translation of transcripts, and
CC
     as therapeutic agents. The proteins and peptides are useful as
CC
CC
     therapeutic, prognostic and diagnostic reagents for cancer. The present
CC
     sequence is a human leukocyte antigen (HLA) peptide, used in an example
CC
     from the invention
XX
SO
     Sequence 10 AA;
                          60.4%; Score 29; DB 6; Length 10;
  Query Match
                          62.5%; Pred. No. 95;
  Best Local Similarity
  Matches
             5; Conservative
                               0; Mismatches 3; Indels
                                                                  0; Gaps
Οv
            2 ESYVPLFP 9
              \perp \perp \perp \perp \perp
            1 EOYCPWFP 8
Db
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RESULT 37 ABR02387

ID ABR02387 standard; peptide; 10 AA.

```
XX
AC
    ABR02387;
XX
     19-MAY-2003 (first entry)
DT
XX
    Human cancer-related protein 74P3B3 HLA peptide #522.
DE
XX
KW
    Human; cytostatic; vaccine; cancer; immune response; HLA;
    human leukocyte antigen.
KW
XX
    Homo sapiens.
OS
XX
    WO200283921-A2.
PN
XX
     24-OCT-2002.
PD
XX
     10-APR-2002; 2002WO-US011654.
PF
XX
PR
     10-APR-2001; 2001US-0282739P.
     10-APR-2001; 2001US-0283112P.
PR
     25-APR-2001; 2001US-0286630P.
PR
XX
     (AGEN-) AGENSYS INC.
PΑ
XX
PΤ
     Jakobovits A, Challita-Eid PM, Faris M, Ge W, Hubert RS;
    Morrison K, Morrison RK, Raitano AB;
PΙ
XX
    WPI; 2003-075555/07.
DR
XX
РΨ
    New composition comprising a substance that modulates the structure of
     proteins and polynucleotides, useful for therapeutic, prognostic and
PT
PT
     diagnostic reagents for eliciting cellular or humoral immune response in
PΤ
     cancer patients.
XX
PS
     Claim 13; Page 136; 1021pp; English.
XX
CC
     The present invention relates to novel human cancer-related genes and
CC
     proteins (ABZ78120-ABZ78168 and ABR01789-ABR01861). The genes and
CC
     proteins are useful for eliciting a humoral or cellular immune response.
CC
     The genes are useful as probes and primers for the amplification and/or
CC
     detection of genes, mRNAs or their fragments, as reagents for the
CC
     diagnosis and/or prognosis of cancer, as coding sequences capable of
CC
     directing the expression of the protein, as tools for modulating or
CC
     inhibiting the expression of genes and/or translation of transcripts, and
CC
     as therapeutic agents. The proteins and peptides are useful as
CC
     therapeutic, prognostic and diagnostic reagents for cancer. The present
     sequence is a human leukocyte antigen (HLA) peptide, used in an example
CC
CC
     from the invention
XX
SO
     Sequence 10 AA;
                          60.4%;
                                  Score 29; DB 6; Length 10;
  Query Match
  Best Local Similarity
                          62.5%; Pred. No. 95;
            5; Conservative
                                 0; Mismatches
                                                   3; Indels
                                                                 0; Gaps
                                                                              0;
 Matches
Qy
```

```
RESULT 38
AAW05005
    AAW05005 standard; peptide; 13 AA.
ID
XX
AC
    AAW05005;
XX
DT
     03-DEC-1996 (first entry)
XX
     Peptide related to novel immunomodulators.
DE
XX
KW
     Immunomodulation; immunomodulator; immune system; anergy; deficiency;
KW
     aberrant response; chronic bronchitis; atopic disease; AIDS;
     acquired immune deficiency syndrome; herpes virus infection.
KW
XX
OS
     Synthetic.
XX
     WO9611943-A1.
PN
XX
     25-APR-1996.
PD
XX
PF
     06-OCT-1995:
                    95WO-SE001151.
XX
                    94SE-00003526.
PR
     14-OCT-1994;
XX
PΑ
     (ASTR ) ASTRA AB.
XX
PΙ
     Bergstrand H, Eriksson T, Karabelas K, Lindvall M, Saernstrand B;
XX
     WPI; 1996-221938/22.
DR
XX
PT
     Peptide(s) with immunomodulatory activity - useful for treating e.g.
PT
     chronic bronchitis, malignancies, herpes, AIDS or atopic disease, as
     adjuvants in vaccines, or for inhibiting graft rejection.
PT
XX
PS
     Claim 1; Page 50; 63pp; English.
XX
     The present peptide is one of 6 known peptides which concord with a
CC
CC
     highly generic sequence covering immunomodulatory peptides of 4-15 amino
CC
     acids being claimed in the present patent application; all 6 peptides are
CC
     specifically excluded from the claim
XX
SQ
     Sequence 13 AA;
  Query Match
                          60.4%; Score 29; DB 2; Length 13;
  Best Local Similarity 66.7%; Pred. No. 1.3e+02;
 Matches
            4; Conservative 1; Mismatches 1; Indels
                                                                 0; Gaps
                                                                              0;
            4 YVPLFP 9
QУ
             +:++1
Db
           1 YIPCFP 6
```

RESULT 39 AAW41667

```
AAW41667 standard; peptide; 13 AA.
ID
XX
    AAW41667;
AC
XX
DT
     27-APR-1998 (first entry)
XX
     Immunomodulatory peptide.
DE
XX
KW
     Immunomodulator; immunosuppressant; immunostimulator; treatment;
KW
     transplant rejection; autoimmune disease; cancer; infection.
XX
OS
     Synthetic.
XX
ΡN
     WO9739023-A1.
XX
PD
     23-OCT-1997.
XX
     04-APR-1997;
                   97WO-SE000574.
PF
XX
     12-APR-1996;
                    96SE-00001422.
PR
                    96SE-00003469.
PR
     23-SEP-1996;
XX
     (ASTR ) ASTRA AB.
PΑ
XX
PΙ
     Bergstrand H, Eriksson T, Lindvall M, Saernstrand B;
XX
     WPI; 1997-526397/48.
DR
XX
     Nucleic acids encoding cysteine- or methionine-containing peptide(s)
PT
PT
     which have immuno:stimulatory or immunosuppressive activity - can be used
PT
     to treat, e.g. cancers, infection, auto:immune disease or transplant
PT
     rejection.
XX
PS
     Disclosure; Page 19; 183pp; English.
XX
     A novel immunosuppressing or immunostimulatory peptide conforms to the
CC
CC
     motifs represented by the formulae of the invention, with the proviso
CC
     that the peptides described in AAW36999, AAW37000 and AAW41647 to
CC
     AAW41682 are excluded. An immunosuppressant can be used to treat
CC
     transplant rejection or autoimmune disease, e.g. rheumatoid arthritis,
CC
     systemic lupus erythematosis, Sjogren's syndrome, scleroderma, mixed
CC
     connective tissue disease, dermatomyositis, polymyositis, Reiter's
CC
     syndrome, Behcet's disease, type I diabetes, Hashimoto's thyroiditis,
CC
     Graves' disease, multiple sclerosis, myasthenia gravis,
CC
     encephalomyelitis, phemphigus vulgaris, vegetans or foliaceus, Senear-
CC
     Usher syndrome or Brazilian phemphiqus. An immunostimulator can be used
CC
     to treat conditions such as cancer or infection
XX
SQ
     Sequence 13 AA;
  Query Match
                          60.4%; Score 29; DB 2; Length 13;
  Best Local Similarity
                          66.7%; Pred. No. 1.3e+02;
  Matches
            4; Conservative
                                1; Mismatches
                                                 1; Indels
                                                                  0; Gaps
            4 YVPLFP 9
Qу
              1:111
Db
            1 YIPCFP 6
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```
RESULT 40
AAU17675
     AAU17675 standard; protein; 13 AA.
XX
AC
     AAU17675;
XX
DT
     07-NOV-2001 (first entry)
XX
DΕ
     Novel signal transduction pathway protein, Seq ID 1240.
XX
KW
     Neuroprotective; cytostatic; dermatological; immunosuppressive; tumour;
     antiinflammatory; anti-HIV; antibacterial; antiinflammatory; cancer;
KW
KW
     immune system disorder; rheumatoid arthritis; inflammatory condition;
KW
     organ transplant rejection; infection; hepatitis C; blood disorder;
     sickle cell anaemia; hyperproliferative disorder; Gaucher's disease;
KW
KW
     neurodegenerative disorder; Alzheimer's disease; Parkinson's disease;
ΚŴ
     chromosomal abnormality; Down syndrome; ischaemia; renal disorder;
KW
     cardiovascular; respiratory; wound healing; endocrine; Addison's disease;
KW
     reproductive system; gastrointestinal; liver disorder; AIDS;
KW
     acquired immune deficiency syndrome.
XX
OS
     Homo sapiens.
XX
ΡN
     WO200154733-A1.
XX
     02-AUG-2001.
PD
XX
PF
     17-JAN-2001; 2001WO-US001312.
XX
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     31-JAN-2000; 2000US-0179065P.
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PR

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     06-DEC-2000; 2000US-0251479P.
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     08-DEC-2000; 2000US-0251856P.
     08-DEC-2000; 2000US-0251868P.
PR
PR
     08-DEC-2000; 2000US-0251869P.
PR
     08-DEC-2000; 2000US-0251989P.
PR
     08-DEC-2000; 2000US-0251990P.
PR
     11-DEC-2000; 2000US-0254097P.
PR
     05-JAN-2001; 2001US-0259678P.
XX
PA
     (HUMA-) HUMAN GENOME SCI INC.
XX
PΙ
     Rosen CA, Barash SC, Ruben SM;
```

```
XX
    WPI; 2001-465460/50.
DR
XX
PT
    Novel polypeptides useful for diagnosing, treating, preventing and/or
    prognosing disorders related to the proteins, including cancers, immune
PT
PΨ
     disorders and neuronal disorders.
XX
PS
    Claim 1; SEQ ID NO 1240; 880pp; English.
XX
CC
    The invention relates to novel isolated polypeptides (I), and
    polynucleotides (II). (I), (II) and the antibody to (I) are useful for
CC
    diagnosing, preventing and treating diseases including immune system
CC
CC
     disorders (e.g. congenital and acquired immunodeficiencies, autoimmune
CC
    disorders (e.g rheumatoid arthritis), inflammatory conditions, organ
CC
     transplant rejections and graft versus host disease, infectious diseases
CC
     (e.g. hepatitis C), bleeding disorders, haemoglobin abnormalities and
CC
     other blood-related disorders (sickle cell anaemia), myeloproliferative
CC
    disorders, primary haematopoietic disorders, hyperproliferative disorders
     (e.g. Gaucher's disease and cancer), neurodegenerative disorders (e.g.
CC
CC
    Alzheimer's disease, Parkinson's disease), chromosomal abnormalities
CC
     (Down syndrome), ischaemic injury (e.g. stroke), renal disorders (e.g.
CC
     glomerulonephritis), cardiovascular disorders (e.g. arrhythmia),
CC
     respiratory disorders, dermatological disorders, in wound healing,
CC
     epithelial cell proliferation, endocrine disorders (e.g. Addison's
CC
    disease), reproductive system disorders, gastrointestinal disorder
CC
     (inflammatory disorders), liver disorders (cirrhosis), as stimulators of
CC
     B-cell responsiveness to pathogens, activators of T-cells, to induce
CC
    higher affinity antibodies, and as a means to induce tumour proliferation
CC
     in pathologies e.g. acquired immune deficiency syndrome (AIDS). AAU17059-
CC
    AAU17683 represent novel signal transduction pathway protein, amino acid
CC
    sequences of the invention
XX
SO
    Sequence 13 AA;
 Query Match
                          60.4%;
                                  Score 29; DB 4; Length 13;
  Best Local Similarity
                         71.4%; Pred. No. 1.3e+02;
 Matches
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                                 1; Mismatches
                                                  1; Indels
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           3 SYVPLFP 9
Qу
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Dh
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RESULT 41
AB027231
ID
    ABO27231 standard; peptide; 13 AA.
XX
AC
    ABO27231;
XX
DT
    10-SEP-2003 (first entry)
XX
DΕ
    Gab3 PXXP motif #3.
XX
KW
    Mouse; Gab3; gene therapy; infectious disease; cancer; wound healing;
KW
    neural disorder; immune system disorder; systemic lupus erythematosus;
    rheumatoid arthritis; multiple sclerosis; muscular disorder; sinusitis;
KW
KW
    respiratory disease; nasal vestibulitis; nasal polyp; pulmonary disorder;
```

cardiovascular disorder; congenital heart defect; Ebstein's anomaly; KW hypoplastic left heart syndrome; renal disorder; acute kidney failure; KW ΚW end-stage renal disease; hyperproliferative disorder; Hodgkin's disease; KW leukaemia; inflammatory disease; septic shock; bursitis; appendicitis; allergy; asthma; blood related disorder; thrombosis; atherosclerosis; KW KW myocardial infarction; endocrine disorder; Addinson's disease; dysphagia; corticosteroid deficiency; reproductive system disorder; dysmenorrhea; KW testicular atrophy; gastrointestinal disorder; irritable bowel syndrome; KW KW epithelial cell proliferation.

Synthetic.

XX OS

XX PN

XX

XX

XX

XX PI

XX

DR XX PT

PT

PT PT

XX PS

XX CC

XX SO US2003036505-A1.

XX PD 20-FEB-2003.

PF 20-SEP-2001; 2001US-00955999.

PR 25-SEP-2000; 2000US-0234997P.

PA (HUMA-) HUMAN GENOME SCI INC.

Barash SC, Ni J, Ruben SM, Rosen CA, Young PE, Rohrschneider LR;

WPI; 2003-492122/46.

New isolated nucleic acids encoding signal transduction pathway component polypeptides, useful for diagnosing, treating, and/or preventing disorders, such as cancer, infections, cardiovascular and inflammatory diseases.

Disclosure; Page 7; 297pp; English.

The invention relates to an isolated nucleic acid molecule. The methods and compositions of the present invention are useful for diagnosing, treating, preventing and/or prognosing disorders related to the novel polypeptides, such as neural disorders, immune system disorders (e.g. systemic lupus erythematosus, rheumatoid arthritis, or multiple sclerosis), muscular disorders, respiratory diseases (e.g. nasal vestibulitis, nasal polyps, or sinusitis), reproductive disorders, gastrointestinal disorders, pulmonary disorders, cardiovascular disorders (e.g. congenital heart defects, Ebstein's anomaly or hypoplastic left heart syndrome), renal disorders (e.g. acute kidney failure, or end-stage renal disease), hyperproliferative disorders (e.g. Hodgkin's disease or leukaemia), inflammatory diseases (e.g. septic shock, bursitis, or appendicitis), allergic reactions and conditions (e.g. asthma), blood related disorders (e.g. thrombosis, atherosclerosis or myocardial infarction), endocrine disorders (e.g. Addinson's disease or corticosteroid deficiency), reproductive system disorders (e.g. testicular atrophy or dysmenorrhea), gastrointestinal disorders (e.g. dysphagia or irritable bowel syndrome), infectious diseases, and/or cancerous diseases. The polymucleotides can also be used to aid wound healing and epithelial cell proliferation. The present sequence represents the amino acid sequence of a mouse Gab3 domain/motif

Sequence 13 AA;

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60.4%; Score 29; DB 6; Length 13;
  Query Match
                          71.4%; Pred. No. 1.3e+02;
  Best Local Similarity
                                                    1; Indels
                                                                  0; Gaps
                                                                               0;
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Qу
            3 SYVPLFP 9
              1111: 1
            1 SYVPMSP 7
Db
RESULT 42
ADB94383
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XX
AC
     ADB94383;
XX
DT
     04-DEC-2003 (first entry)
XX
DE
     Novel human protein associated polypeptide #4.
XX
     human; autoimmune disease; Parkinson's disease; silicosis;
KW
     qastrointestinal disease; atherosclerosis; haemophilia; thrombocytopenia;
ΚW
     immunosuppressive agent; adjuvant; enhance immune response;
KW
     higher affinity antibody induction;
KW
     increased serum immunoglobulin concentration.
KW
XX
OS
     Homo sapiens.
XX
     US2002168711-A1.
PN
XX
     14-NOV-2002.
PD
XX
     17-JAN-2001; 2001US-00764868.
PF
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PR
     04-FEB-2000; 2000US-0180628P.
PR
     28-JUN-2000; 2000US-0214886P.
PR
     07-JUL-2000; 2000US-0216647P.
PR
     07-JUL-2000; 2000US-0216880P.
     11-JUL-2000; 2000US-0217487P.
PR
     11-JUL-2000; 2000US-0217496P.
PR
     14-JUL-2000; 2000US-0218290P.
PR
PR
     26-JUL-2000; 2000US-0220963P.
     26-JUL-2000; 2000US-0220964P.
PR
     14-AUG-2000; 2000US-0224518P.
PR
PR
     14-AUG-2000; 2000US-0224519P.
PR
     14-AUG-2000; 2000US-0225267P.
     14-AUG-2000; 2000US-0225268P.
PR
     14-AUG-2000; 2000US-0225270P.
PR
     14-AUG-2000; 2000US-0225447P.
PR
     14-AUG-2000; 2000US-0225757P.
PR
     14-AUG-2000; 2000US-0225758P.
PR
PR
     22-AUG-2000; 2000US-0226868P.
     30-AUG-2000; 2000US-0228924P.
PR
PR
     01-SEP-2000; 2000US-0229287P.
PR
     01-SEP-2000; 2000US-0229343P.
     01-SEP-2000; 2000US-0229344P.
PR
PR
     01-SEP-2000; 2000US-0229345P.
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05-SEP-2000; 2000US-0229509P.
PR
     05-SEP-2000; 2000US-0229513P.
PR
     08-SEP-2000; 2000US-0231413P.
PR
     21-SEP-2000; 2000US-0234223P.
PR
     21-SEP-2000; 2000US-0234274P.
PR
     25-SEP-2000; 2000US-0234997P.
PR
     27-SEP-2000; 2000US-0235834P.
PR
     29-SEP-2000; 2000US-0236327P.
PR
     29-SEP-2000; 2000US-0236367P.
PR
PR
     29-SEP-2000; 2000US-0236368P.
     29-SEP-2000; 2000US-0236369P.
PR
     29-SEP-2000; 2000US-0236370P.
PR
     02-OCT-2000; 2000US-0236802P.
PR
     02-OCT-2000; 2000US-0237037P.
PR
     02-OCT-2000; 2000US-0237038P.
PR
     02-OCT-2000; 2000US-0237039P.
PR
     02-OCT-2000; 2000US-0237040P.
PR
     13-OCT-2000; 2000US-0239935P.
PR
     20-OCT-2000; 2000US-0240960P.
PR
     20-OCT-2000; 2000US-0241785P.
PR
     20-OCT-2000; 2000US-0241809P.
PR
     01-NOV-2000; 2000US-0244617P.
PR
     17-NOV-2000; 2000US-0249299P.
PR
     08-DEC-2000; 2000US-0251856P.
PR
     08-DEC-2000; 2000US-0251868P.
PR
PR
     08-DEC-2000; 2000US-0251869P.
XX
PA
     (ROSE/) ROSEN C A.
     (RUBE/) RUBEN S M.
PΑ
     (BARA/) BARASH S C.
PA
XX
PΙ
     Rosen CA, Ruben SM,
                            Barash SC;
XX
DR
```

WPI; 2003-719985/68.

XX

PT

PTPT

XX PS

XX CC

CCCC

CCCC

CC

CC

CC

CC

CC

CCСC

CC CC

CC

CC

New isolated polypeptide useful for diagnosing and treating immunosuppressive conditions such as autoimmune disease and Parkinson's disease.

Disclosure; SEQ ID NO 1240; 345pp; English.

The invention relates to an isolated polypeptide. The polypeptide is useful for diagnosing a pathological condition or a susceptibility to a pathological condition in a subject, by determining the presence or amount of expression of the polypeptide in a biological sample and diagnosing a pathological condition or a susceptibility to a pathological condition based on the presence or amount of expression of the polypeptide. The polypeptide is also useful for identifying a binding partner to the polypeptide, which involves contacting the polypeptide with a binding partner and determining whether the binding partner effects an activity of the polypeptide. The polypeptide or the nucleic acid encoding the polypeptide is useful for preventing, treating, or ameliorating a medical condition, which involves administering the polypeptide or the nucleic acid to a mammalian subject. The nucleic acid is useful for diagnosing a pathological condition or a susceptibility to a pathological condition in a subject, which involves determining the presence or absence of a mutation in The nucleic acid, and diagnosing a

```
CC
     pathological condition or susceptibility to a pathological condition
     based on the presence or absence of the mutation. The polypeptide, the
CC
CC
     nucleic acid and an antibody to the polypeptide are useful for treating
     autoimmune disease, Parkinson's disease, silicosis, gastrointestinal
CC
CC
     disease, atherosclerosis, haemophilia, thrombocytopenia. The polypeptide,
CC
     the nucleic acid and the antibody are useful as immunosuppressive agents,
CC
     as adjuvants to enhance immune responses, and as agents to induce higher
CC
     affinity antibodies and increase serum immunoglobulin concentrations. The
CC
     present sequence represents the amino acid sequence of a novel human
CC
     protein associated polypeptide. Note: The sequence data for this patent
CC
     did not form part of the printed specification but was obtained in
CC
     electronic format direct from USPTO at
CC
     seqdata.uspto.gov/sequence.html?DocID=20020168711.
XX
SQ
     Sequence 13 AA;
  Query Match
                          60.4%; Score 29; DB 7; Length 13;
  Best Local Similarity
                          71.4%; Pred. No. 1.3e+02;
  Matches
            5; Conservative
                              1; Mismatches
                                                   1; Indels
                                                                  0;
                                                                              0;
                                                                     Gaps
            3 SYVPLFP 9
Qу
              1111: 1
Db
            1 SYVPMSP 7
RESULT 43
AAP80629
ID
    AAP80629 standard; protein; 14 AA.
XX
AC
    AAP80629;
XX
DT
     25-MAR-2003
                  (revised)
DT
     17-SEP-1990
                  (first entry)
XX
DE
     Synthetic hydrophobic surfactant-associated protein (SAP) (Val) peptide.
XX
KW
     Synthetic hydrophobic surfactant-associated protein (SAP) (Val);
KW
    hyaline membrane disease (HMD) prevention; assays.
XX
os
     Homo sapiens.
XX
PN
    W08803170-A.
XX
PD
     05-MAY-1988.
XX
PF
     02-OCT-1987;
                    87WO-US002536.
XX
     24-OCT-1986;
                    86WO-US002258.
PR
                    86US-00939206.
PR
     08-DEC-1986;
PR
     10-JUN-1987;
                    87US-00060719.
PR
     01-OCT-1987;
                    87US-00101680.
PR
     03-DEC-1987;
                    87WO-US003180.
XX
PA
     (WHIT/) WHITSETT J A.
PA
     (ABBO ) ABBOTT LAB.
XX
PΙ
     Whitsett JA, Fox JL, Pilotmatia TJ, Meuth JL, Sarin VK;
```

```
XX
DR
     WPI; 1988-133244/19.
XX
     Pulmonary hydrophobic surfactant-associated proteins - used with lipid(s)
PT
     to treat and prevent hyaline membrane disease and similar syndromes.
PT
XX
PS
     Claim 8; Page 83; 144pp; English.
XX
CC
     It can be made by chemical or enzymatic peptide synthesis. Also claimed
CC
     is a purified and isolated DNA sequence encoding SAP (Val). SAP (Val) and
     SAP (Phe), when combined with lipids, have significant pulmonary
CC
     biophysical surfactant activity that may be utilised to treat and prevent
CC
     hyaline membrane disease (HMD) and other syndromes associated with lack
CC
     or insufficient amts. of natural pulmonary surfactant material.
CC
CC
    Antibodies and antisera may also be made which are directed against SAP
     (Val) or SAP (Phe). SAP (Val) and SAP (Phe) in body fluids may be assayed
CC
     using the compsns. (Updated on 25-MAR-2003 to correct PR field.) (Updated
CC
CC
     on 25-MAR-2003 to correct PA field.) (Updated on 25-MAR-2003 to correct
CC
     PI field.)
XX
SQ
     Sequence 14 AA;
                          60.4%; Score 29; DB 1; Length 14;
  Query Match
  Best Local Similarity
                          66.7%; Pred. No. 1.4e+02;
                                                                 0; Gaps
                                                                              0;
  Matches
            4; Conservative
                                1; Mismatches 1; Indels
            4 YVPLFP 9
Qу
             1:1 11
Db
            1 YIPCFP 6
RESULT 44
AAW05004
ID
     AAW05004 standard; peptide; 14 AA.
XX
AC
     AAW05004;
XX
DT
     03-DEC-1996 (first entry)
XX
DΕ
     Peptide related to novel immunomodulators.
XX
KW
     Immunomodulation; immunomodulator; immune system; anergy; deficiency;
KW
     aberrant response; chronic bronchitis; atopic disease; AIDS;
KW
     acquired immune deficiency syndrome; herpes virus infection.
XX
OS
     Synthetic.
XX
     W09611943-A1.
PN
XX
     25-APR-1996.
PD
XX
ΡF
     06-OCT-1995; 95WO-SE001151.
XX
PR
     14-OCT-1994; 94SE-00003526.
XX
PΑ
     (ASTR ) ASTRA AB.
XX
```

```
XX
DR
    WPI; 1996-221938/22.
XX
PT
     Peptide(s) with immunomodulatory activity - useful for treating e.g.
     chronic bronchitis, malignancies, herpes, AIDS or atopic disease, as
PT
     adjuvants in vaccines, or for inhibiting graft rejection.
PT
XX
     Claim 1; Page 50; 63pp; English.
PS
XX
CC
     The present peptide is one of 6 known peptides which concord with a
     highly generic sequence covering immunomodulatory peptides of 4-15 amino
CC
CC
     acids being claimed in the present patent application; all 6 peptides are
CC
     specifically excluded from the claim
XX
SQ
     Sequence 14 AA;
  Query Match
                          60.4%; Score 29; DB 2; Length 14;
                          66.7%; Pred. No. 1.4e+02;
  Best Local Similarity
  Matches
          4; Conservative
                                 1; Mismatches
                                                  1; Indels
                                                                 0; Gaps
                                                                             0;
            4 YVPLFP 9
Qy
              +:+++
            1 YIPCFP 6
Db
RESULT 45
AAW41666
ID
     AAW41666 standard; peptide; 14 AA.
XX
AC
     AAW41666;
XX
     27-APR-1998 (first entry)
DT
XX
DE
     Immunomodulatory peptide.
XX
     Immunomodulator; immunosuppressant; immunostimulator; treatment;
KW
     transplant rejection; autoimmune disease; cancer; infection.
KW
XX
OS
     Synthetic.
XX
PN
     WO9739023-A1.
XX
PD
     23-OCT-1997.
XX
     04-APR-1997; 97WO-SE000574.
PF
XX
PR
     12-APR-1996;
                    96SE-00001422.
     23-SEP-1996; 96SE-00003469.
PR
XX
PA
     (ASTR ) ASTRA AB.
XX
     Bergstrand H, Eriksson T, Lindvall M, Saernstrand B;
PI
XX
     WPI; 1997-526397/48.
DR
XX
     Nucleic acids encoding cysteine- or methionine-containing peptide(s)
PT
```

Bergstrand H, Eriksson T, Karabelas K, Lindvall M, Saernstrand B;

PI

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which have immuno:stimulatory or immunosuppressive activity - can be used
PT
     to treat, e.g. cancers, infection, auto: immune disease or transplant
PT
PT
     rejection.
XX
     Disclosure; Page 19; 183pp; English.
PS
XX
CC
    A novel immunosuppressing or immunostimulatory peptide conforms to the
    motifs represented by the formulae of the invention, with the proviso
CC
     that the peptides described in AAW36999, AAW37000 and AAW41647 to
CC
CC
    AAW41682 are excluded. An immunosuppressant can be used to treat
    transplant rejection or autoimmune disease, e.g. rheumatoid arthritis,
CC
     systemic lupus erythematosis, Sjogren's syndrome, scleroderma, mixed
CC
CC
     connective tissue disease, dermatomyositis, polymyositis, Reiter's
     syndrome, Behcet's disease, type I diabetes, Hashimoto's thyroiditis,
CC
    Graves' disease, multiple sclerosis, myasthenia gravis,
CC
     encephalomyelitis, phemphigus vulgaris, vegetans or foliaceus, Senear-
CC
    Usher syndrome or Brazilian phemphiqus. An immunostimulator can be used
CC
     to treat conditions such as cancer or infection
CC
XX
     Sequence 14 AA;
SQ
  Query Match
                          60.4%;
                                  Score 29; DB 2; Length 14;
                          66.7%; Pred. No. 1.4e+02;
  Best Local Similarity
                                                                 0; Gaps
                                                                             0;
           4; Conservative
                               1; Mismatches
                                                  1; Indels
 Matches
            4 YVPLFP 9
Qу
              1:11
            1 YIPCFP 6
Db
RESULT 46
ABP46646
ID
    ABP46646 standard; peptide; 14 AA.
XX
AC
    ABP46646;
XX
DT
     19-AUG-2002 (first entry)
XX
     Human BLyS binding scFv VH CDR3 SEQ ID 2657.
DE
XX
     BLys; B lymphocyte stimulator; TNF superfamily; human; cytostatic;
KW
     tumour necrosis factor; B cell proliferation; B cell differentiation;
KW
     immunosuppressive; immunostimulant; immunomodulatory; antirheumatic;
KW
KW
     antiAIDS; vaccine; cancer; immune; autoimmune disorder; immunodeficiency;
KW
     systemic lupus erythematosus; rheumatoid arthritis; CVID; AIDS;
     common variable immunodeficiency; acquired immunodeficiency syndrome.
KW
XX
OS
     Homo sapiens.
XX
PN
     WO200202641-A1.
XX
     10-JAN-2002.
PD
XX
PF
     15-JUN-2001; 2001WO-US019110.
XX
     16-JUN-2000; 2000US-0212210P.
PR
PR
     17-OCT-2000; 2000US-0240816P.
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16-MAR-2001; 2001US-0276248P.
PR
     21-MAR-2001; 2001US-0277379P.
PR
     25-MAY-2001; 2001US-0293499P.
PR
XX
PA
     (HUMA-) HUMAN GENOME SCI INC.
     (CAMB-) CAMBRIDGE ANTIBODY TECHNOLOGY.
PΑ
XX
                Barash SC, Choi GH, Vaughan T, Hilbert D;
PI
     Ruben SM,
XX
DR
     WPI; 2002-114799/15.
XX
     Antibodies against B Lymphocyte Stimulating polypeptides, useful for the
PT
     diagnosis and treatment of cancers and immune disorders.
PT
XX
     Claim 2; Page 3027; 3148pp; English.
PS
XX
     This invention describes novel antibodies that immunospecifically bind to
CC
     B Lymphocyte Stimulator (BLyS) polypeptides. BLyS is a member of the
CC
     tumour necrosis factor (TNF) super family and induces B cell
CC
     proliferation and differentiation. The antibodies of the invention have
CC
     cytostatic, immunosuppressive, immunostimulant, immunomodulatory,
CC
     antirheumatic and antiAIDS activity and can be used in vaccines to
CC
     inhibit the expression and activity of BLyS. The antibodies bind to BLyS
CC
     and so may be used to detect and quantitate the presence of BLyS in
CC
     biological samples and may be used in this way to diagnose disease
CC
     associated with aberrant expression of BLyS. They may also be
CC
     administered to treat diseases associated with aberrant BLyS expression
CC
     and activity such as cancer, immune, and autoimmune disorders and
CC
     diseases, e.g. systemic lupus erythematosus, rheumatoid arthritis,
CC
     immunodeficiency (e.g. common variable immunodeficiency (CVID) and
CC
     acquired immunodeficiency syndrome (AIDS)). ABP43990-ABP47228 represent
CC
     the antibodies and fragments of the antibodies described in the method of
CC
CC
     the invention
XX
SQ
     Sequence 14 AA;
  Query Match
                          60.4%;
                                  Score 29; DB 5; Length 14;
  Best Local Similarity
                          83.3%; Pred. No. 1.4e+02;
                                                                  0; Gaps
                                                                              0;
  Matches
             5; Conservative
                                 0; Mismatches
                                                   1; Indels
            4 YVPLFP 9
Qу
              1 1111
            9 YSPLFP 14
Db
RESULT 47
AAU82854
     AAU82854 standard; peptide; 10 AA.
ID
XX
AC
     AAU82854;
XX
DT
     23-APR-2002 (first entry)
XX
DΕ
     Human Calcitonin targeted peptide #60.
XX
     Dopamine D2DA; receptor; muscarinic M1; nerve growth factor; calcitonin;
KW
KW
     human; retro-inverso peptide; physicochemical mode;
```

```
protein-targeted peptide.
KW
XX
     Homo sapiens.
OS
     Synthetic.
OS
XX
    US2002009756-A1.
PN
XX
PD
     24-JAN-2002.
XX
PF
     23-JAN-2001; 2001US-00767460.
XX
     24-JAN-2000; 2000US-00490702.
PR
XX
     (MAND/) MANDELL A J.
PA
     (SELZ/) SELZ K A.
PA
     (SHLE/) SHLESINGER M F.
PA
XX
PΙ
    Mandell AJ, Selz KA,
                            Shlesinger MF;
XX
DR
    WPI; 2002-163853/21.
XX
     Synthesizing peptides based on matching a physicochemical mode of a
PT
     peptide to the same physicochemical mode of a target polypeptide or
PT
PT
    protein.
XX
PS
     Example 3; Page 24; 33pp; English.
XX
CC
    The invention relates to a method for synthesising a peptide based on
    matching a physicochemical mode of a peptide to the same physicochemical
CC
CC
    mode of a target polypeptide or protein, followed by synthesising a retro
CC
     -inverso peptide version of the peptide comprised of D-amino acids. The
CC
    method is used for designing protein-targeted peptides or peptide
CC
     analogues whose sequences are derived from the target protein sequences
CC
     using target protein sequence, analytically derived templates, and
CC
     relevant distributions of amino acids for weighted random assignments to
CC
     those templates. The protein targets include cell receptors,
CC
     transporters, enzymes, chaperonins, antibodies, surface proteins of
CC
     infectious agents, and any protein involved in protein-protein
CC
     interactions. The method provides an entirely new way of designing
CC
     peptides or peptide analogue molecules capable of binding to and/or
CC
     otherwise modulating the function of protein targets having known amino
CC
     acid sequences. The methods employ three kinds of templates, derived from
CC
     analyses of the target protein sequences, in addition to relevant
CC
     distributions of amino acids, for weighted and constrained random
CC
     assignments to the templates to produce the peptides. The present
CC
     sequence is a peptide derived by the method of the invention targeting
CC
     either the human dopamine D2DA receptor, muscarinic M1 receptor, nerve
CC
     growth factor receptor or calcitonin
XX
SQ
     Sequence 10 AA;
                          58.3%; Score 28; DB 5; Length 10;
  Query Match
  Best Local Similarity
                          71.4%; Pred. No. 1.5e+02;
            5; Conservative
                                 0; Mismatches
                                                  2; Indels
                                                                 0; Gaps
```

3 SYVPLFP 9

Qу

CC

CC

CC

```
RESULT 48
AAW39045
    AAW39045 standard; peptide; 17 AA.
XX
AC
    AAW39045;
XX
DT
     27-MAR-1998
                 (first entry)
XX
DE
     Peptide resembling an SH3 domain binding peptide SEQ ID NO:446.
XX
     Cortactin; SH3 domain; binding peptide; Src homology region 3;
KW
     tyrosine kinase; immune response; lymphokine; interleukin 1; Nck; Abl;
KW
     PLCgamma; p53bp2; Crk; Yes; Grb2.
KW
XX
os
     Synthetic.
XX
    WO9730074-A1.
PN
XX
PD
     21-AUG-1997.
XX
PF
     14-FEB-1997;
                    97WO-US002298.
XX
PR
     16-FEB-1996;
                    96US-00602999.
XX
PΑ
     (CYTO-) CYTOGEN CORP.
     (UYNC-) UNIV NORTH CAROLINA.
PA
XX
PΙ
     Sparks AB, Kay BK,
                          Thorn JM, Quilliam LA, Der CJ, Fowlkes DM;
ΡI
     Rider JE:
XX
DR
    WPI; 1997-424972/39.
XX
PT
     Src homology region 3 binding peptide - used to activate Src tyrosine
PΤ
     kinase(s) and to stimulate immune response by increasing production of
PT
     certain lymphokine(s), e.g. interleukin-1.
XX
PS
     Claim 22; Page 94; 131pp; English.
XX
CC
     The present sequence represents a peptide which resembles a Src homology
     region 3 (SH3) binding peptide. SH3 binding peptides are selected from:
CC
CC
     (a) peptides which bind the SH3 domain of Cortactin; (b) peptides which
     bind the middle SH3 domain of Nck; (c) peptides which bind the SH3 domain
CC
CC
     of Abl; (d) peptides which bind the SH3 domain of Src; (e) peptides which
CC
     bind the SH3 domain of PLC gamma; (f) peptides which bind the SH3 domain
     of p53bp2; (g) peptides which bind the amino-terminal SH3 domain of Crk;
CC
CC
     (h) peptides which bind the SH3 domain of Yes; and (i) peptides which
     bind the amino-terminal SH3 domain of Grb2. The purified binding peptides
CC
CC
     can be used in the method to identify inhibitors of their binding to
     their respective SH3 domains, which could be used to modulate the
CC
CC
     pharmacological activity of proteins or polypeptide containing the SH3
CC
     domain. The peptides can also be used to activate Src or Src-related
```

protein tyrosine kinases, to stimulate the immune response by increasing

the production of certain lymphokines, e.g. tumour necrosis factor-alpha

and interleukin-1, or to deliver a conjugated molecule to certain

```
CC
     cellular compartments containing Src or Src related proteins
XX
     Sequence 17 AA;
SO
  Query Match
                          58.3%; Score 28; DB 2; Length 17;
  Best Local Similarity
                          50.0%; Pred. No. 2.5e+02;
             4; Conservative
                                 2; Mismatches
                                                                  0; Gaps
                                                                              0;
                                                   2; Indels
            2 ESYVPLFP 9
Qу
              1 1:1: 1
Db
            6 EWYIPIIP 13
RESULT 49
AAE18839
     AAE18839 standard; peptide; 11 AA.
ID
XX
АC
     AAE18839;
XX
DT
     17-MAY-2002 (first entry)
XX
DE
     Human calreticulin N-domain motif #1.
XX
KW
     Human; prostate cancer; calreticulin; TID-1 protein; TRAITS protein;
     androgen action pathway; cell proliferation; kidney cancer; lymphoma;
KW
KW
     epithelium-derived carcinoma; leukaemia; vaccine; gene therapy; U19;
KW
     N domain; cytostatic.
XX
OS
     Homo sapiens.
XX
PN
     WO200206327-A2.
XX
PD
     24-JAN-2002.
XX
PF
     17-JUL-2001; 2001WO-US022357.
XX
PR
     17-JUL-2000; 2000US-0218761P.
     16-JUL-2001; 2001US-00906393.
PR
XX
     (NOUN ) UNIV NORTHWESTERN.
PA
XX
PΙ
     Wang Z, Xiao W;
XX
     WPI; 2002-179780/23.
DR
XX
PT
     Identifying a subject that is likely to have aggressive form of prostate
PT
     cancer, involves comparing calreticulin levels in prostate specimen of
PT
     the subject and in benign prostatic epithelial cells of the same subject.
XX
PS
     Example 2; Page 83; 148pp; English.
XX
CC
     The present invention relates to methods of distinguishing aggressive
CC
     forms of prostate cancer from non-aggressive forms. The method involves
CC
     comparing the level of calreticulin in prostate specimen and in benign
CC
     prostatic epithelial cells of a subject. The invention particularly
CC
     relates to two proteins, namely calreticulin and TID-1 (TRAITS; U19) that
CC
     are down-regulated in aggressive forms of prostate cancer but not in
```

```
slowly progressing prostate cancer. They play important roles in the part
CC
     of androgen action pathway that suppresses cell proliferation and/or
CC
     prevents prostate cancer. The method is useful for identifying a subject
CC
     who is likely to have an aggressive form of prostate cancer. The
CC
     invention further relates to a method of identifying a subject with a
CC
     slow growing form of prostate cancer. TID-1 sequences are useful for
CC
     treating cancers such as epithelium-derived carcinomas, kidney cancers,
CC
     lymphomas, leukaemias and prostate cancers. Sequences of the invention
CC
CC
     are used as vaccines and in gene therapy. The present peptide sequence is
CC
     human calreticulin N domain motif which interacts with integrin alpha
XX
     Sequence 11 AA;
SQ
                          56.2%; Score 27; DB 5; Length 11;
  Query Match
  Best Local Similarity
                          83.3%; Pred. No. 2.5e+02;
                                                                             0;
  Matches
            5; Conservative
                                 0; Mismatches
                                                  1; Indels
                                                                 0; Gaps
            4 YVPLFP 9
Qу
              5 YVKLFP 10
Db
RESULT 50
ABR58779
     ABR58779 standard; peptide; 12 AA.
ID
XX
AC
    ABR58779;
XX
DT
     11-JUL-2003
                 (first entry)
XX
DE
     Alzheimer's Disease-associated protein isoform, API-384, SEQ ID 304.
XX
KW
     Nootropic; Neuroprotective; Alzheimer's disease; API; human;
KW
     Alzheimer's Disease-associated protein isoform.
XX
OS
     Homo sapiens.
XX
PN
     WO2003028543-A2.
XX
PD
     10-APR-2003.
XX
PF
     03-OCT-2002; 2002WO-US031642.
XX
PR
     03-OCT-2001; 2001US-0326708P.
XX
PA
     (PFIZ ) PFIZER PROD INC.
PA
     (OXFO-) OXFORD GLYCOSCIENCES UK LTD.
XX
                 Friedman DL, Herath HMAC, Kimmel LH, Parekh RB;
PΙ
     Potter DM, Rohlff C, Silber BM, Snyder PJ, Soares HD, Stiger TR;
PI
PΙ
     Sunderland PT, Townsend RR, White WF, Williams SA;
XX
DR
     WPI; 2003-371957/35.
XX
     Screening or diagnosing of Alzheimer's disease (AD) determine the stage
PT or severity of AD in a subject, comprises analyzing a test sample of body
     fluid from the subject by 2-dimensional electrophoresis.
```

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XX
    Claim 2; Page 33; 179pp; English.
PS
XX
CC
    The present invention relates to methods for screening or diagnosing
    Alzheimer's disease (AD) to determine the stage or severity of AD in a
CC
    subject, to identify subject at risk of developing AD, or to monitor the
CC
    effect of therapy administered. The methods comprise analysing a test
CC
    sample of body fluid by 2-dimensional electrophoresis to generate a 2-
CC
    dimensional array of AD-associated features (AFs). The method
CC
     alternatively comprises quantitatively detecting in a sample of body
CC
CC
     fluid from the subject, one or more AD-associated protein isoforms (APIs;
    ABR58710-ABR59184)
CC
XX
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                                 Score 27; DB 6; Length 12;
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                                Pred. No. 2.7e+02;
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Qy
              2 VESYTP 7
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Search completed: July 4, 2004, 04:40:59 Job time: 24.0896 secs

## GenCore version 5.1.6 Copyright (c) 1993 - 2004 Compugen Ltd.

OM protein - protein search, using sw model

Run on: July 4, 2004, 04:37:26; Search time 5.64179 Seconds

(without alignments)

82.356 Million cell updates/sec

Title: US-09-641-802-31

Perfect score: 48

Sequence: 1 VESYVPLFP 9

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 389414 segs, 51625971 residues

Total number of hits satisfying chosen parameters: 121837

Minimum DB seq length: 7
Maximum DB seq length: 18

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 100 summaries

Database : Issued Patents AA:\*

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2: /cgn2\_6/ptodata/2/iaa/5B\_COMB.pep:\*

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5: /cgn2\_6/ptodata/2/iaa/PCTUS\_COMB.pep:\*

6: /cgn2 6/ptodata/2/iaa/backfiles1.pep:\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## SUMMARIES

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|----|-------|--------|-------|--------|-------|--------------------|-------------------|
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|    | No.   | Score  | Match | Length | DB    | ID                 | Description       |
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|    | 3     | 29     | 60.4  | 13     | 3     | US-08-836-480-37   | Sequence 37, Appl |
|    | 4     | 29     | 60.4  | 13     | 3     | US-09-562-897-37   | Sequence 37, Appl |
|    | 5     | 29     | 60.4  | 14     | 3     | US-08-836-480-36   | Sequence 36, Appl |
|    | 6     | 29     | 60.4  | 14     | 3     | US-09-562-897-36   | Sequence 36, Appl |
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| 13       | 26   | 54.2 | 17  | 6 | 5223424-4           | Patent No. 5223424 |
| 14       | 25   | 52.1 | 10  | 3 | US-08-159-339A-1151 | Sequence 1151, Ap  |
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| 19       | 25   | 52.1 | 11  | 3 | US-08-652-877-69    | Sequence 69, Appl  |
| 20       | 25   | 52.1 | 11  | 3 | US-08-476-515A-69   | Sequence 69, Appl  |
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| 30       | 24   | 50.0 | 10  | 1 | US-08-362-232-3     | Sequence 3, Appli  |
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| 45       | 24   | 50.0 | 14  | 1 | US-08-103-490A-23   | Sequence 23, Appl  |
| 46       | 24   | 50.0 | 14  | 1 | US-08-103-490A-40   | Sequence 40, Appl  |
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| 77  | 23 | 47.9 | 14 | 1 | US-08-290-448A-10  | Sequence | 10, Appl |
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| 89  | 22 | 45.8 | 7  | 3 | US-09-040-786-12   | Sequence | 12, Appl |
| 90  | 22 | 45.8 | 7  | 3 | US-09-118-408-26   | Sequence | 26, Appl |
| 91  | 22 | 45.8 | 7  | 4 | US-09-209-525-25   | Sequence | 25, Appl |
| 92  | 22 | 45.8 | 7  | 4 | US-09-506-855-26   | Sequence | 26, Appl |
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## ALIGNMENTS

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; Sequence 31, Application US/09641803
; Patent No. 6500798
; GENERAL INFORMATION:
  APPLICANT: STANTON, G. John
  APPLICANT: HUGHES, Thomas K.
  APPLICANT: BOLDOGH, Istvan
  TITLE OF INVENTION: USE OF COLOSTRININ, CONSTITUENT PEPTIDES THEREOF, AND
  TITLE OF INVENTION: ANALOGS THEREOF AS OXIDATIVE STRESS REGULATORS
  FILE REFERENCE: 265.00220101
  CURRENT APPLICATION NUMBER: US/09/641,803
  CURRENT FILING DATE: 2000-08-17
   PRIOR APPLICATION NUMBER: 60/149,310
  PRIOR FILING DATE: 1999-08-17
  NUMBER OF SEQ ID NOS: 34
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 31
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   TYPE: PRT
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   OTHER INFORMATION: peptide
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; Patent No. 6560542
; GENERAL INFORMATION:
  APPLICANT: Mandell, Arnold
  APPLICANT: Selz, Karen
  APPLICANT: Shlesinger, Michael
   TITLE OF INVENTION: Algorithmic Design of Peptides for Binding and/or
Modulation of the
  TITLE OF INVENTION: Functions of Receptors and/or Other Proteins
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; CURRENT APPLICATION NUMBER: US/09/490,702B
  CURRENT FILING DATE: 2000-01-24
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; Sequence 37, Application US/08836480
; Patent No. 6103697
  GENERAL INFORMATION:
     APPLICANT: Bergstrand, Hakan
     APPLICANT: Erickson, Tomas
     APPLICANT: Karabelas, Kostas
```

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APPLICANT: Lindvall, Magnus
;
    APPLICANT: Sarnstrand, Bengt
    TITLE OF INVENTION: NEW PEPTIDES WITH IMMUNOMODULATORY EFFECTS
    NUMBER OF SEQUENCES: 39
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Fish & Richardson, P.C.
      STREET: 225 Franklin Street
      CITY: Boston
      STATE: MA
      COUNTRY: US
      ZIP: 02110-2804
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Diskette
       COMPUTER: IBM Compatible
      OPERATING SYSTEM: Windows95
       SOFTWARE: FastSEQ for Windows Version 2.0
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/836,480
      FILING DATE: 14-APR-1997
      CLASSIFICATION: 514
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: SE 95\403256-8
      FILING DATE: 14-OCT-1994
    ATTORNEY/AGENT INFORMATION:
      NAME: Fraser, Janis K.
      REGISTRATION NUMBER: 34,819
       REFERENCE/DOCKET NUMBER: 06275/036001
    TELECOMMUNICATION INFORMATION:
       TELEPHONE: 617-542-5070
       TELEFAX: 617-542-8906
   INFORMATION FOR SEQ ID NO:
    SEQUENCE CHARACTERISTICS:
       LENGTH: 13 amino acids
       TYPE: amino acid
       TOPOLOGY: linear
    MOLECULE TYPE: peptide
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; Sequence 37, Application US/09562897
; Patent No. 6228374
    GENERAL INFORMATION:
        APPLICANT: Bergstrand, Hakan
                   Erickson, Tomas
                    Karabelas, Kostas
                    Lindvall, Magnus
                    Sarnstrand, Bengt
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TITLE OF INVENTION: NEW PEPTIDES WITH IMMUNOMODULATORY EFFECTS
;
        NUMBER OF SEQUENCES: 39
        CORRESPONDENCE ADDRESS:
             ADDRESSEE: Fish & Richardson, P.C.
             STREET: 225 Franklin Street
             CITY: Boston
             STATE: MA
             COUNTRY: US
             ZIP: 02110-2804
        COMPUTER READABLE FORM:
             MEDIUM TYPE: Diskette
             COMPUTER: IBM Compatible
             OPERATING SYSTEM: Windows95
             SOFTWARE: FastSEQ for Windows Version 2.0
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             FILING DATE: 01-May-2000
             CLASSIFICATION: <Unknown>
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             APPLICATION NUMBER: 08/836,480
             FILING DATE: <Unknown>
        ATTORNEY/AGENT INFORMATION:
             NAME: Fraser, Janis K.
             REGISTRATION NUMBER: 34,819
             REFERENCE/DOCKET NUMBER: 06275/036001
        TELECOMMUNICATION INFORMATION:
             TELEPHONE: 617-542-5070
             TELEFAX: 617-542-8906
    INFORMATION FOR SEQ ID NO: 37:
         SEQUENCE CHARACTERISTICS:
             LENGTH: 13 amino acids
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; Patent No. 6103697
  GENERAL INFORMATION:
    APPLICANT: Bergstrand, Hakan
    APPLICANT: Erickson, Tomas
    APPLICANT: Karabelas, Kostas
    APPLICANT: Lindvall, Magnus
    APPLICANT: Sarnstrand, Bengt
    TITLE OF INVENTION: NEW PEPTIDES WITH IMMUNOMODULATORY EFFECTS
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NUMBER OF SEQUENCES: 39
    CORRESPONDENCE ADDRESS:
    ADDRESSEE: Fish & Richardson, P.C.
     STREET: 225 Franklin Street
     CITY: Boston
     STATE: MA
     COUNTRY: US
      ZIP: 02110-2804
   COMPUTER READABLE FORM:
      MEDIUM TYPE: Diskette
      COMPUTER: IBM Compatible
      OPERATING SYSTEM: Windows95
      SOFTWARE: FastSEQ for Windows Version 2.0
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/836,480
      FILING DATE: 14-APR-1997
      CLASSIFICATION: 514
   PRIOR APPLICATION DATA:
    APPLICATION NUMBER: SE 95\403256-8
      FILING DATE: 14-OCT-1994
   ATTORNEY/AGENT INFORMATION:
     NAME: Fraser, Janis K.
      REGISTRATION NUMBER: 34,819
      REFERENCE/DOCKET NUMBER: 06275/036001
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: 617-542-5070
      TELEFAX: 617-542-8906
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; Sequence 36, Application US/09562897
; Patent No. 6228374
   GENERAL INFORMATION:
        APPLICANT: Bergstrand, Hakan
;
                   Erickson, Tomas
                   Karabelas, Kostas
                   Lindvall, Magnus
                   Sarnstrand, Bengt
        TITLE OF INVENTION: NEW PEPTIDES WITH IMMUNOMODULATORY EFFECTS
        NUMBER OF SEQUENCES: 39
        CORRESPONDENCE ADDRESS:
```

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ADDRESSEE: Fish & Richardson, P.C.
;
             STREET: 225 Franklin Street
             CITY: Boston
             STATE: MA
             COUNTRY: US
             ZIP: 02110-2804
        COMPUTER READABLE FORM:
             MEDIUM TYPE: Diskette
             COMPUTER: IBM Compatible
             OPERATING SYSTEM: Windows95
             SOFTWARE: FastSEQ for Windows Version 2.0
        CURRENT APPLICATION DATA:
             APPLICATION NUMBER: US/09/562,897
             FILING DATE: 01-May-2000
             CLASSIFICATION: <Unknown>
        PRIOR APPLICATION DATA:
             APPLICATION NUMBER: 08/836,480
              FILING DATE: <Unknown>
        ATTORNEY/AGENT INFORMATION:
             NAME: Fraser, Janis K.
             REGISTRATION NUMBER: 34,819
             REFERENCE/DOCKET NUMBER: 06275/036001
        TELECOMMUNICATION INFORMATION:
             TELEPHONE: 617-542-5070
             TELEFAX: 617-542-8906
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; Sequence 93, Application US/09490702B
; Patent No. 6560542
; GENERAL INFORMATION:
; APPLICANT: Mandell, Arnold
; APPLICANT: Selz, Karen
; APPLICANT: Shlesinger, Michael
; TITLE OF INVENTION: Algorithmic Design of Peptides for Binding and/or
Modulation of the
; TITLE OF INVENTION: Functions of Receptors and/or Other Proteins
; FILE REFERENCE: 01561-0002-00US00
; CURRENT APPLICATION NUMBER: US/09/490,702B
; CURRENT FILING DATE: 2000-01-24
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NUMBER OF SEQ ID NOS: 96
  SOFTWARE: PatentIn version 3.0
 SEQ ID NO 93
   LENGTH: 10
   TYPE: PRT
   ORGANISM: Artificial Sequence
   FEATURE:
   NAME/KEY: misc feature
   OTHER INFORMATION: synthetic
US-09-490-702B-93
                         58.3%; Score 28; DB 4; Length 10;
  Query Match
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  Matches
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                              0; Mismatches
                                                2; Indels
                                                                0; Gaps
           3 SYVPLFP 9
Qy
             11 1 11
           3 SYTPEFP 9
Db
RESULT 8
US-08-602-999A-446
; Sequence 446, Application US/08602999A
; Patent No. 6184205
  GENERAL INFORMATION:
    APPLICANT: SPARKS, Andrew B.
    APPLICANT: KAY, Brian K.
    APPLICANT: THORN, Judith M.
    APPLICANT: QUILLIAM, Lawrence A.
    APPLICANT: DER, Channing J.
    APPLICANT: FOWLKES, Dana M.
    APPLICANT: RIDER, James E.
    TITLE OF INVENTION: SH3 BINDING PEPTIDES AND METHODS OF
    TITLE OF INVENTION: ISOLATING AND USING SAME
    NUMBER OF SEQUENCES: 467
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Pennie & Edmonds
       STREET: 1155 Avenue of the Americas
      CITY: New York
;
       STATE: New York
       COUNTRY: U.S.A.
       ZIP: 10036-2711
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
       COMPUTER: IBM PC compatible
       OPERATING SYSTEM: PC-DOS/MS-DOS
       SOFTWARE: PatentIn Release #1.0, Version #1.30
     CURRENT APPLICATION DATA:
       APPLICATION NUMBER: US/08/602,999A
       FILING DATE: 16-FEB-1996
       CLASSIFICATION: 435
;
    ATTORNEY/AGENT INFORMATION:
      NAME: Misrock, S. Leslie
      REGISTRATION NUMBER: 18,872
;
      REFERENCE/DOCKET NUMBER: 1101-202
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: (212) 790-9090
```

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;
      TELEX: 66141 PENNIE
   INFORMATION FOR SEQ ID NO: 446:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 17 amino acids
      TYPE: amino acid
      TOPOLOGY: unknown
    MOLECULE TYPE: peptide
US-08-602-999A-446
                         58.3%; Score 28; DB 3; Length 17;
  Query Match
  Best Local Similarity 50.0%; Pred. No. 68;
 Matches
           4; Conservative
                              2; Mismatches
                                                  2; Indels
                                                                0; Gaps
                                                                            0;
           2 ESYVPLFP 9
Qу
             | |:|: |
           6 EWYIPIIP 13
RESULT 9
US-08-602-999A-447
; Sequence 447, Application US/08602999A
; Patent No. 6184205
  GENERAL INFORMATION:
    APPLICANT: SPARKS, Andrew B.
    APPLICANT: KAY, Brian K.
    APPLICANT: THORN, Judith M.
    APPLICANT: QUILLIAM, Lawrence A.
    APPLICANT: DER, Channing J.
    APPLICANT: FOWLKES, Dana M.
    APPLICANT: RIDER, James E.
    TITLE OF INVENTION: SH3 BINDING PEPTIDES AND METHODS OF
    TITLE OF INVENTION: ISOLATING AND USING SAME
    NUMBER OF SEQUENCES: 467
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Pennie & Edmonds
      STREET: 1155 Avenue of the Americas
      CITY: New York
      STATE: New York
      COUNTRY: U.S.A.
      ZIP: 10036-2711
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
       SOFTWARE: PatentIn Release #1.0, Version #1.30
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/602,999A
      FILING DATE: 16-FEB-1996
      CLASSIFICATION: 435
    ATTORNEY/AGENT INFORMATION:
      NAME: Misrock, S. Leslie
      REGISTRATION NUMBER: 18,872
      REFERENCE/DOCKET NUMBER: 1101-202
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: (212) 790-9090
      TELEFAX: (212) 869-9741/8864
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TELEFAX: (212) 869-9741/8864

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TELEX: 66141 PENNIE
  INFORMATION FOR SEQ ID NO: 447:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 17 amino acids
      TYPE: amino acid
      TOPOLOGY: unknown
    MOLECULE TYPE: peptide
US-08-602-999A-447
  Query Match
                         58.3%; Score 28; DB 3; Length 17;
  Best Local Similarity 50.0%; Pred. No. 68;
 Matches
           4; Conservative 2; Mismatches
                                                2; Indels
                                                                 0; Gaps
                                                                             0;
           2 ESYVPLFP 9
Qу
              1 1:1: 1
           6 EWYIPIIP 13
Dh
RESULT 10
US-09-500-124-446
; Sequence 446, Application US/09500124
; Patent No. 6432920
  GENERAL INFORMATION:
    APPLICANT: SPARKS, Andrew B.
    APPLICANT: KAY, Brian K. APPLICANT: THORN, Judith M.
    APPLICANT: QUILLIAM, Lawrence A.
    APPLICANT: DER, Channing J.
    APPLICANT: FOWLKES, Dana M.
    APPLICANT: RIDER, James E.
    TITLE OF INVENTION: SH3 BINDING PEPTIDES AND METHODS OF
    TITLE OF INVENTION: ISOLATING AND USING SAME
    NUMBER OF SEQUENCES: 467
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Pennie & Edmonds
      STREET: 1155 Avenue of the Americas
      CITY: New York
      STATE: New York
      COUNTRY: U.S.A.
      ZIP: 10036-2711
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
      SOFTWARE: PatentIn Release #1.0, Version #1.30
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/09/500,124
      FILING DATE:
      CLASSIFICATION:
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: 08/602,999
      FILING DATE: 16-FEB-1996
    ATTORNEY/AGENT INFORMATION:
      NAME: Misrock, S. Leslie
      REGISTRATION NUMBER: 18,872
      REFERENCE/DOCKET NUMBER: 1101-202
    TELECOMMUNICATION INFORMATION:
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TELEPHONE: (212) 790-9090
       TELEFAX: (212) 869-9741/8864
       TELEX: 66141 PENNIE
   INFORMATION FOR SEQ ID NO: 446:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 17 amino acids
      TYPE: amino acid
      TOPOLOGY: unknown
    MOLECULE TYPE: peptide
US-09-500-124-446
  Query Match
                          58.3%; Score 28; DB 4; Length 17;
  Best Local Similarity 50.0%; Pred. No. 68;
           4; Conservative
                              2; Mismatches 2; Indels
                                                                 0; Gaps
                                                                             0;
Qу
           2 ESYVPLFP 9
             | |:|: |
Db
            6 EWYIPIIP 13
RESULT 11
US-09-500-124-447
; Sequence 447, Application US/09500124
; Patent No. 6432920
  GENERAL INFORMATION:
    APPLICANT: SPARKS, Andrew B. APPLICANT: KAY, Brian K.
;
    APPLICANT: THORN, Judith M.
;
    APPLICANT: QUILLIAM, Lawrence A.
    APPLICANT: DER, Channing J.
    APPLICANT: FOWLKES, Dana M.
    APPLICANT: RIDER, James E.
    TITLE OF INVENTION: SH3 BINDING PEPTIDES AND METHODS OF
    TITLE OF INVENTION: ISOLATING AND USING SAME
    NUMBER OF SEQUENCES: 467
    CORRESPONDENCE ADDRESS:
;
     ADDRESSEE: Pennie & Edmonds
      STREET: 1155 Avenue of the Americas
      CITY: New York
      STATE: New York
      COUNTRY: U.S.A.
      ZIP: 10036-2711
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
      COMPUTER: IBM PC compatible
;
      OPERATING SYSTEM: PC-DOS/MS-DOS
      SOFTWARE: PatentIn Release #1.0, Version #1.30
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/09/500,124
      FILING DATE:
      CLASSIFICATION:
    PRIOR APPLICATION DATA:
     APPLICATION NUMBER: 08/602,999
      FILING DATE: 16-FEB-1996
    ATTORNEY/AGENT INFORMATION:
      NAME: Misrock, S. Leslie
      REGISTRATION NUMBER: 18,872
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REFERENCE/DOCKET NUMBER: 1101-202
;
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: (212) 790-9090
      TELEFAX: (212) 869-9741/8864
      TELEX: 66141 PENNIE
  INFORMATION FOR SEQ ID NO: 447:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 17 amino acids
      TYPE: amino acid
      TOPOLOGY: unknown
    MOLECULE TYPE: peptide
US-09-500-124-447
                         58.3%; Score 28; DB 4; Length 17;
  Query Match
  Best Local Similarity 50.0%; Pred. No. 68;
          4; Conservative 2; Mismatches
                                                2; Indels 0; Gaps
  Matches
                                                                           0;
           2 ESYVPLFP 9
Qу
             1 1:1: 1
           6 EWYIPIIP 13
Db
RESULT 12
US-08-960-190A-30
; Sequence 30, Application US/08960190A
; Patent No. 6232445
; GENERAL INFORMATION:
    APPLICANT: Rhode, Peter R.
    APPLICANT: Acevedo, Jorge
    APPLICANT: Burkhardt, Martin
    APPLICANT: Jiao, Jin-an
    APPLICANT: Wong, Hing C.
    TITLE OF INVENTION: SOLUBLE MHC COMPLEXES AND
    TITLE OF INVENTION: METHODS OF USE THEREOF
    NUMBER OF SEQUENCES: 38
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Dike, Bronstein, Roberts & Cushman, LLP
      STREET: 130 Water Street
      CITY: Boston
      STATE: MA
      COUNTRY: usa
      ZIP: 02109
;
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Diskette
      COMPUTER: IBM Compatible
      OPERATING SYSTEM: DOS
      SOFTWARE: FastSEQ for Windows Version 2.0
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/960,190A
      FILING DATE: 29-OCT-1997
      CLASSIFICATION: 536
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER:
;
      FILING DATE:
    ATTORNEY/AGENT INFORMATION:
;
      NAME: Corless, Peter F
      REGISTRATION NUMBER: 33,860
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REFERENCE/DOCKET NUMBER: 48002
;
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: 617-523-3400
      TELEFAX: 617-523-6440
      TELEX:
  INFORMATION FOR SEQ ID NO:
   SEQUENCE CHARACTERISTICS:
      LENGTH: 11 amino acids
      TYPE: amino acid
      STRANDEDNESS: single
      TOPOLOGY: linear
    MOLECULE TYPE: protein
US-08-960-190A-30
  Query Match
                         54.2%; Score 26; DB 3; Length 11;
 Best Local Similarity 50.0%; Pred. No. 98;
          4; Conservative 2; Mismatches
                                                 2; Indels 0; Gaps
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           2 ESYVPLFP 9
Qу
            | | |:|: |
           3 EEYMPMEP 10
RESULT 13
5223424-4
; Patent No. 5223424
    APPLICANT: COCHRAN, MARK; CHIANG, CHRISTINA H.; MACDONALD,
    TITLE OF INVENTION: ATTENUATED HERPESVIRUSES AND
; HERPESVIRUSES WHICH INCLUDE FOREIGN DNA ENCODING AN AMINO
;ACID SEQUENCE
    NUMBER OF SEQUENCES: 16
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/07/225,032
      FILING DATE: 27-JUL-1988
    PRIOR APPLICATION DATA:
    APPLICATION NUMBER: 78,519
     FILING DATE: 27-JUL-1987
     APPLICATION NUMBER: 933,107
     FILING DATE: 20-NOV-1986
      APPLICATION NUMBER: 902,887
      FILING DATE: 02-SEP-1986
      APPLICATION NUMBER: 887,140
      FILING DATE: 17-JUL-1986
      APPLICATION NUMBER: 823,102
      FILING DATE: 27-JAN-1986
      APPLICATION NUMBER: 773,430
      FILING DATE: 06-SEP-1985
;SEQ ID NO:4:
       LENGTH: 17
5223424-4
                         54.2%; Score 26; DB 6; Length 17;
  Query Match
  Best Local Similarity 55.6%; Pred. No. 1.6e+02;
           5; Conservative 1; Mismatches 3; Indels 0; Gaps
  Matches
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RESULT 14
US-08-159-339A-1151
; Sequence 1151, Application US/08159339A
; Patent No. 6037135
  GENERAL INFORMATION:
    APPLICANT: Kubo, Ralph T.
    APPLICANT: Grey, Howard M.
    APPLICANT: Sette, Alessandro
    APPLICANT: Celis, Esteban
    TITLE OF INVENTION: HLA Binding peptides and Their
    TITLE OF INVENTION: Uses
    NUMBER OF SEQUENCES: 1254
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Townsend and Townsend and Crew LLP
      STREET: Two Embarcadero Center, Eighth Floor
      CITY: San Francisco
      STATE: CA
      COUNTRY: USA
      ZIP: 94111-3834
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Diskette
      COMPUTER: IBM Compatible
      OPERATING SYSTEM: DOS
      SOFTWARE: FastSEQ for Windows Version 2.0
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/159,339A
      FILING DATE: 29-NOV-1993
      CLASSIFICATION: 424
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: US 07/926,666
      FILING DATE: 07-AUG-1992
      APPLICATION NUMBER: US 08/027,746
      FILING DATE: 05-MAR-1993
      APPLICATION NUMBER: US 08/103,396
      FILING DATE: 06-AUG-1993
    ATTORNEY/AGENT INFORMATION:
      NAME: Weber, Ellen Lauver
       REGISTRATION NUMBER: 32,762
       REFERENCE/DOCKET NUMBER: 018623-005030US
    TELECOMMUNICATION INFORMATION:
       TELEPHONE: (415) 576-0200
      TELEFAX: (415) 576-0300
       TELEX:
   INFORMATION FOR SEQ ID NO:
     SEQUENCE CHARACTERISTICS:
       LENGTH: 10 amino acids
       TYPE: amino acid
       STRANDEDNESS: single
       TOPOLOGY: linear
    MOLECULE TYPE: peptide
US-08-159-339A-1151
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Best Local Similarity 80.0%; Pred. No. 1.3e+02;
 Matches 4; Conservative 1; Mismatches 0; Indels 0; Gaps 0;
           5 VPLFP 9
            |||:|
           2 VPLYP 6
Db
RESULT 15
US-07-906-349A-12
; Sequence 12, Application US/07906349A
; Patent No. 5434064
; GENERAL INFORMATION:
    APPLICANT: Schlessinger, Joseph
    APPLICANT: Skolnik, Edward Y.
    APPLICANT: Margolis, Benjamin L.
    TITLE OF INVENTION: A NOVEL EXPRESSION-CLONING METHOD FOR
    TITLE OF INVENTION: IDENTIFYING TARGET PROTEINS FOR EUKARYOTIC TYROSINE
KINASES AND
    TITLE OF INVENTION: TARGET PROTEINS
    NUMBER OF SEQUENCES: 16
    CORRESPONDENCE ADDRESS:
;
     ADDRESSEE: Browdy and Neimark
;
      STREET: 419 Seventh Street, N.W.
;
      CITY: Washington
;
      STATE: D.C.
      COUNTRY: USA
;
      ZIP: 20004
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
      SOFTWARE: PatentIn Release #1.0, Version #1.25
    CURRENT APPLICATION DATA:
     APPLICATION NUMBER: US/07/906,349A
      FILING DATE: 30-JUN-1992
     CLASSIFICATION: 435
    PRIOR APPLICATION DATA:
     APPLICATION NUMBER: 07/643,237
      FILING DATE: 18-JAN-1991
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: 202-628-5197
      TELEFAX: 202-737-3528
  INFORMATION FOR SEQ ID NO: 12:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 11 amino acids
      TYPE: amino acid
      STRANDEDNESS: single
      TOPOLOGY: linear
    MOLECULE TYPE: peptide
US-07-906-349A-12
                         52.1%; Score 25; DB 1; Length 11;
  Query Match
  Best Local Similarity 66.7%; Pred. No. 1.5e+02;
  Matches 4; Conservative 1; Mismatches 1; Indels 0; Gaps
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RESULT 16
US-08-167-035-12
; Sequence 12, Application US/08167035
; Patent No. 5618691
  GENERAL INFORMATION:
    APPLICANT: Schlessinger, Joseph
    APPLICANT: Skolnick, Edward Y.
    APPLICANT: Margolis, Benjamin L.
    TITLE OF INVENTION: NOVEL EXPRESSION CLONING METHOD FOR
    TITLE OF INVENTION: IDENTIFYING TARGET PROTEINS FOR EUKARYOTIC TYROSINE
    TITLE OF INVENTION: KINASES AND NOVEL TARGET PROTEINS
    NUMBER OF SEQUENCES: 50
     CORRESPONDENCE ADDRESS:
      ADDRESSEE: PENNIE & EDMONDS
      STREET: 1155 Avenue of the Americas
      CITY: New York
      STATE: New York
      COUNTRY: 10036-2711
      ZIP: 10036-2711
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
      SOFTWARE: PatentIn Release #1.0, Version #1.30
     CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/167,035
      FILING DATE: 16-DEC-1993
      CLASSIFICATION: 435
     ATTORNEY/AGENT INFORMATION:
      NAME: Coruzzi, Laura A.
      REGISTRATION NUMBER: 30,742
      REFERENCE/DOCKET NUMBER: 7683-062
     TELECOMMUNICATION INFORMATION:
      TELEPHONE: (212) 790-9090
      TELEFAX: (212) 869-9741/8864
      TELEX: 66141 PENNIE
   INFORMATION FOR SEQ ID NO: 12:
     SEQUENCE CHARACTERISTICS:
       LENGTH: 11 amino acids
      TYPE: amino acid
      TOPOLOGY: unknown
     MOLECULE TYPE: peptide
     FEATURE:
      NAME/KEY: Modified-site
      LOCATION: 6
      OTHER INFORMATION: /label= A
      OTHER INFORMATION: /note= "The tyrosine is phosphorylated."
US-08-167-035-12
                         52.1%; Score 25; DB 1; Length 11;
  Query Match
  Best Local Similarity
                         66.7%; Pred. No. 1.5e+02;
  Matches
            4; Conservative
                               1; Mismatches 1; Indels
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                                                                0; Gaps
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2 ESYVPL 7
Qy
             1 111:
           4 EEYVPM 9
Db
RESULT 17
US-08-208-887A-12
; Sequence 12, Application US/08208887A
; Patent No. 5677421
  GENERAL INFORMATION:
    APPLICANT: Schlessinger, Joseph
    APPLICANT: Skolnick, Edward Y.
    APPLICANT: Margolis, Benjamin L.
    TITLE OF INVENTION: NOVEL EXPRESSION CLONING METHOD FOR
    TITLE OF INVENTION: IDENTIFYING TARGET PROTEINS FOR EUKARYOTIC TYROSINE
    TITLE OF INVENTION: KINASES AND NOVEL TARGET PROTEINS
    NUMBER OF SEQUENCES: 51
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: PENNIE & EDMONDS
     STREET: 1155 Avenue of the Americas
     CITY: New York
      STATE: New York
     COUNTRY: 10036-2711
      ZIP: 10036-2711
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
      SOFTWARE: PatentIn Release #1.0, Version #1.30
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/208,887A
      FILING DATE: 11-MAR-1994
      CLASSIFICATION: 435
    ATTORNEY/AGENT INFORMATION:
      NAME: Coruzzi, Laura A.
      REGISTRATION NUMBER: 30,742
      REFERENCE/DOCKET NUMBER: 7683-063
    TELECOMMUNICATION INFORMATION:
       TELEPHONE: (212) 790-9090
       TELEFAX: (212) 869-9741/8864
       TELEX: 66141 PENNIE
   INFORMATION FOR SEQ ID NO:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 11 amino acids
;
      TYPE: amino acid
       TOPOLOGY: unknown
    MOLECULE TYPE: peptide
    FEATURE:
       NAME/KEY: Modified-site
       LOCATION: 6
       OTHER INFORMATION: /label= A
       OTHER INFORMATION: /note= "The tyrosine is phosphorylated."
US-08-208-887A-12
                         52.1%; Score 25; DB 1; Length 11;
  Query Match
  Best Local Similarity 66.7%; Pred. No. 1.5e+02;
  Matches 4; Conservative 1; Mismatches 1; Indels 0; Gaps
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2 ESYVPL 7
Qу
             | |||:
           4 EEYVPM 9
Db
RESULT 18
US-08-539-005-12
; Sequence 12, Application US/08539005
; Patent No. 5858686
  GENERAL INFORMATION:
     APPLICANT: Schlessinger, Joseph
     APPLICANT: Skolnick, Edward Y.
     APPLICANT: Margolis, Benjamin L.
     TITLE OF INVENTION: NOVEL EXPRESSION CLONING METHOD FOR
    TITLE OF INVENTION: IDENTIFYING TARGET PROTEINS FOR EUKARYOTIC TYROSINE TITLE OF INVENTION: KINASES AND NOVEL TARGET PROTEINS
    NUMBER OF SEQUENCES: 50
    CORRESPONDENCE ADDRESS:
     ADDRESSEE: PENNIE & EDMONDS
      STREET: 1155 Avenue of the Americas
      CITY: New York
       STATE: New York
       COUNTRY: 10036-2711
       ZIP: 10036-2711
    COMPUTER READABLE FORM:
       MEDIUM TYPE: Floppy disk
       COMPUTER: IBM PC compatible
       OPERATING SYSTEM: PC-DOS/MS-DOS
       SOFTWARE: PatentIn Release #1.0, Version #1.30
     CURRENT APPLICATION DATA:
       APPLICATION NUMBER: US/08/539,005
       FILING DATE: 4-OCT-1995
       CLASSIFICATION: 435
     PRIOR APPLICATION DATA:
     APPLICATION NUMBER: US 08/167,035
       FILING DATE: 16-DEC-1993
      CLASSIFICATION: 435
    ATTORNEY/AGENT INFORMATION:
       NAME: Coruzzi, Laura A.
       REGISTRATION NUMBER: 30,742
       REFERENCE/DOCKET NUMBER: 7683-062
     TELECOMMUNICATION INFORMATION:
       TELEPHONE: (212) 790-9090
       TELEFAX: (212) 869-9741/8864
       TELEX: 66141 PENNIE
   INFORMATION FOR SEQ ID NO: 12:
     SEQUENCE CHARACTERISTICS:
       LENGTH: 11 amino acids
       TYPE: amino acid
       TOPOLOGY: unknown
     MOLECULE TYPE: peptide
     FEATURE:
      NAME/KEY: Modified-site
       LOCATION: 6
       OTHER INFORMATION: /label= A
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OTHER INFORMATION: /note= "The tyrosine is phosphorylated."

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Query Match 52.1%; Score 25; DB 2; Length 11; Best Local Similarity 66.7%; Pred. No. 1.5e+02;
           4; Conservative 1; Mismatches 1; Indels 0; Gaps
                                                                                 0;
 Matches
            2 ESYVPL 7
Qу
              1 111:
            4 EEYVPM 9
Db
RESULT 19
US-08-652-877-69
; Sequence 69, Application US/08652877
; Patent No. 6187548
; GENERAL INFORMATION:
    APPLICANT: Akerstrom, Goran
APPLICANT: Juhlin, Claes
APPLICANT: Rask, Lars
;
     APPLICANT: Crumley, Gregg R.
     APPLICANT: Morse, Clarence C.
     APPLICANT: Murray, Edward M.
     APPLICANT: Hjalm, Goran
     TITLE OF INVENTION: Human Calcium Sensor Protein, Fragments
     TITLE OF INVENTION: Thereof and DNA Encoding Same NUMBER OF SEQUENCES: 106
     CORRESPONDENCE ADDRESS:
       ADDRESSEE: Rhone-Poulenc Rorer Inc.
       STREET: 500 Arcola Rd., 3C43
       CITY: Collegeville
       STATE: PA
       COUNTRY: USA
       ZIP: 19426-0107
     COMPUTER READABLE FORM:
       MEDIUM TYPE: Floppy disk
       COMPUTER: Macintosh
       OPERATING SYSTEM: System 7.5.1
       SOFTWARE: Word 6.0 (Patentin)
     CURRENT APPLICATION DATA:
       APPLICATION NUMBER: US/08/652,877
       FILING DATE:
       CLASSIFICATION: 435
     PRIOR APPLICATION DATA:
       APPLICATION NUMBER: PCT/US95/15203
       FILING DATE: 22-NOV-1995
     PRIOR APPLICATION DATA:
       APPLICATION NUMBER: US 08/344,836
       FILING DATE: 23-NOV-1994
     PRIOR APPLICATION DATA:
       APPLICATION NUMBER: US 08/487,314
       FILING DATE: 07-JUNE-1995
     ATTORNEY/AGENT INFORMATION:
       NAME: Savitzky, Martin
       REGISTRATION NUMBER: 29,699
      REFERENCE/DOCKET NUMBER: A1355E-US
   TELECOMMUNICATION INFORMATION:
      TELEPHONE: 610-454-3816
```

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TELEFAX: 610-454-3808
  INFORMATION FOR SEQ ID NO: 69:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 11 amino acids
      TYPE: amino acid
     STRANDEDNESS:
     TOPOLOGY: linear
    MOLECULE TYPE: peptide
    HYPOTHETICAL: NO
    FRAGMENT TYPE: internal
US-08-652-877-69
 Query Match
                          52.1%; Score 25; DB 3; Length 11;
 Best Local Similarity 66.7%; Pred. No. 1.5e+02;
          4; Conservative 1; Mismatches 1; Indels
                                                                 0; Gaps
 Matches
                                                                             0;
           2 ESYVPL 7
Qу
             | |||:
           4 EEYVPM 9
Ŋ'n
RESULT 20
US-08-476-515A-69
; Sequence 69, Application US/08476515A
; Patent No. 6239270
  GENERAL INFORMATION:
    APPLICANT: Akerstrom, Goran
    APPLICANT: Juhlin, Claes
    APPLICANT: Rask, Lars
    APPLICANT: Crumley, Gregg R.
    APPLICANT: Morse, Clarence C.
    APPLICANT: Murray, Edward M.
    APPLICANT: Hjalm, Goran
    TITLE OF INVENTION: Human Calcium Sensor Protein, Fragments TITLE OF INVENTION: Thereof and DNA Encoding Same
    NUMBER OF SEQUENCES: 84
    CORRESPONDENCE ADDRESS:
     ADDRESSEE: Martin Savitzky
      STREET: Rhone-Poulenc Rorer Inc., 500 Arcola Rd.;
      STREET: 3C43,
      CITY: Collegeville
      STATE: PA
;
      COUNTRY: USA
      ZIP: 19426-0107
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
      COMPUTER: Compaq PC
      OPERATING SYSTEM: Windows 95
       SOFTWARE: Word 7.0 (Patentin)
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/476,515A
      FILING DATE: 07-JUN-1995
      CLASSIFICATION: 435
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: US 08/344,836
       FILING DATE: 23-NOV-1994
   PRIOR APPLICATION DATA:
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APPLICATION NUMBER: WO PCT/SE94/00483
      FILING DATE: 24-MAY-1994
    PRIOR APPLICATION DATA:
;
      APPLICATION NUMBER: SE 9301764-8
      FILING DATE: 24-MAY-1993
    ATTORNEY/AGENT INFORMATION:
      NAME: Savitzky, Martin
      REGISTRATION NUMBER: 29,699
      REFERENCE/DOCKET NUMBER: A1355D
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: 610-454-3816
      TELEFAX: 610-454-3808
  INFORMATION FOR SEQ ID NO: 69:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 11 amino acids
      TYPE: amino acid
      STRANDEDNESS:
      TOPOLOGY: linear
    MOLECULE TYPE: peptide
    HYPOTHETICAL: NO
    FRAGMENT TYPE: internal
US-08-476-515A-69
                         52.1%; Score 25; DB 3; Length 11;
 Query Match
 Best Local Similarity 66.7%; Pred. No. 1.5e+02;
 Matches 4; Conservative 1; Mismatches 1; Indels
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                                                                0; Gaps
Qy
           2 ESYVPL 7
             1 111:
           4 EEYVPM 9
Dh
RESULT 21
US-09-280-598-12
; Sequence 12, Application US/09280598
; Patent No. 6391584
  GENERAL INFORMATION:
    APPLICANT: Schlessinger, Joseph
    APPLICANT: Skolnik, Edward Y.
;
    APPLICANT: Margolis, Benjamin L.
;
    APPLICANT: App, Harold
    TITLE OF INVENTION: A NOVEL EXPRESSION-CLONING METHOD FOR
    TITLE OF INVENTION: IDENTIFYING TARGET PROTEINS FOR EUKARYOTIC TYROSINE
    TITLE OF INVENTION: KINASES AND NOVEL TARGET PROTEINS
    NUMBER OF SEQUENCES: 58
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Pennie & Edmonds
      STREET: 1155 Avenue of the Americas
;
      CITY: New York
;
      STATE: New York
      COUNTRY: USA
      ZIP: 10036-2711
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
      COMPUTER: IBM PC compatible
;
      OPERATING SYSTEM: PC-DOS/MS-DOS
;
      SOFTWARE: PatentIn Release #1.0, Version #1.25
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CURRENT APPLICATION DATA:
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      APPLICATION NUMBER: US/09/280,598
      FILING DATE:
      CLASSIFICATION:
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: US/08/252,820
      FILING DATE: 02-JUN-1994
;
    ATTORNEY/AGENT INFORMATION:
      NAME: Coruzzi, Laura A.
      REGISTRATION NUMBER: 30,742
      REFERENCE/DOCKET NUMBER: 7683-067
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: (212) 790-9090
      TELEFAX: (212) 869-9741/8864
      TELEX: 66141 PENNIE
  INFORMATION FOR SEQ ID NO: 12:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 11 amino acids
      TYPE: amino acid
      TOPOLOGY: unknown
    MOLECULE TYPE: peptide
    FEATURE:
      NAME/KEY: Modified-site
      LOCATION:
      OTHER INFORMATION: /label= A
      OTHER INFORMATION: /note= "The tyrosine is phosphorylated."
US-09-280-598-12
                         52.1%; Score 25; DB 4; Length 11;
  Query Match
  Best Local Similarity 66.7%; Pred. No. 1.5e+02;
                              1; Mismatches 1; Indels 0; Gaps
 Matches
          4; Conservative
                                                                            0:
           2 ESYVPL 7
QУ
             1 111:
           4 EEYVPM 9
Db
RESULT 22
US-08-602-999A-379
; Sequence 379, Application US/08602999A
; Patent No. 6184205
  GENERAL INFORMATION:
    APPLICANT: SPARKS, Andrew B.
    APPLICANT: KAY, Brian K.
    APPLICANT: THORN, Judith M.
    APPLICANT: QUILLIAM, Lawrence A.
    APPLICANT: DER, Channing J.
    APPLICANT: FOWLKES, Dana M.
    APPLICANT: RIDER, James E.
    TITLE OF INVENTION: SH3 BINDING PEPTIDES AND METHODS OF
;
    TITLE OF INVENTION: ISOLATING AND USING SAME
    NUMBER OF SEQUENCES: 467
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Pennie & Edmonds
      STREET: 1155 Avenue of the Americas
      CITY: New York
      STATE: New York
```

```
COUNTRY: U.S.A.
       ZIP: 10036-2711
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
     SOFTWARE: PatentIn Release #1.0, Version #1.30
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/602,999A
      FILING DATE: 16-FEB-1996
      CLASSIFICATION: 435
    ATTORNEY/AGENT INFORMATION:
       NAME: Misrock, S. Leslie
       REGISTRATION NUMBER: 18,872
       REFERENCE/DOCKET NUMBER: 1101-202
     TELECOMMUNICATION INFORMATION:
       TELEPHONE: (212) 790-9090
       TELEFAX: (212) 869-9741/8864
       TELEX: 66141 PENNIE
  INFORMATION FOR SEQ ID NO: 379:
   SEQUENCE CHARACTERISTICS:
     LENGTH: 15 amino acids
       TYPE: amino acid
       TOPOLOGY: unknown
    MOLECULE TYPE: peptide
US-08-602-999A-379
                          52.1%; Score 25; DB 3; Length 15;
  Query Match
  Best Local Similarity 80.0%; Pred. No. 2.1e+02;
  Matches 4; Conservative 1; Mismatches 0; Indels
                                                                               0;
                                                                0; Gaps
           5 VPLFP 9
QУ
              : | | | |
            7 LPLFP 11
RESULT 23
US-09-500-124-379
; Sequence 379, Application US/09500124
; Patent No. 6432920
  GENERAL INFORMATION:
  APPLICANT: SPARKS, Andrew B. APPLICANT: KAY, Brian K. APPLICANT: THORN, Judith M.
    APPLICANT: QUILLIAM, Lawrence A.
     APPLICANT: DER, Channing J.
     APPLICANT: FOWLKES, Dana M.
     APPLICANT: RIDER, James E.
     TITLE OF INVENTION: SH3 BINDING PEPTIDES AND METHODS OF
    TITLE OF INVENTION: ISOLATING AND USING SAME NUMBER OF SEQUENCES: 467
    CORRESPONDENCE ADDRESS:
     ADDRESSEE: Pennie & Edmonds
       STREET: 1155 Avenue of the Americas
       CITY: New York
       STATE: New York
       COUNTRY: U.S.A.
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ZIP: 10036-2711
;
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
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      SOFTWARE: PatentIn Release #1.0, Version #1.30
    CURRENT APPLICATION DATA:
;
      APPLICATION NUMBER: US/09/500,124
;
      FILING DATE:
;
      CLASSIFICATION:
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: 08/602,999
      FILING DATE: 16-FEB-1996
    ATTORNEY/AGENT INFORMATION:
      NAME: Misrock, S. Leslie
      REGISTRATION NUMBER: 18,872
      REFERENCE/DOCKET NUMBER: 1101-202
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: (212) 790-9090
      TELEFAX: (212) 869-9741/8864
      TELEX: 66141 PENNIE
  INFORMATION FOR SEQ ID NO: 379:
    SEQUENCE CHARACTERISTICS:
;
      LENGTH: 15 amino acids
      TYPE: amino acid
      TOPOLOGY: unknown
    MOLECULE TYPE: peptide
US-09-500-124-379
                         52.1%; Score 25; DB 4; Length 15;
  Query Match
  Best Local Similarity 80.0%; Pred. No. 2.1e+02;
          4; Conservative 1; Mismatches
                                                0; Indels
                                                                0; Gaps
  Matches
Qу
           5 VPLFP 9
             : | | | |
           7 LPLFP 11
Dh
RESULT 24
US-08-213-419B-7
; Sequence 7, Application US/08213419B
; Patent No. 6333406
; GENERAL INFORMATION:
; APPLICANT: Inselburg, J. et al.
  TITLE OF INVENTION: GENE ENCODING PROTEIN ANTIGENS OF PLASMODIUM FALCIPARUM
  TITLE OF INVENTION: AND USES THEREFOR
; FILE REFERENCE: JII-002CNCP
  CURRENT APPLICATION NUMBER: US/08/213,419B
  CURRENT FILING DATE: 1994-03-14
  PRIOR APPLICATION NUMBER: US 07/870,506
  PRIOR FILING DATE: 1992-04-17
; NUMBER OF SEQ ID NOS: 20
; SOFTWARE: PatentIn Ver. 2.0
; SEO ID NO 7
   LENGTH: 16
   TYPE: PRT
   ORGANISM: Plasmodium falciparum
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52.1%; Score 25; DB 4; Length 16;
  Query Match
  Best Local Similarity 50.0%; Pred. No. 2.2e+02;
                                                                           0;
          4; Conservative 3; Mismatches 1; Indels
                                                             0; Gaps
           1 VESYVPLF 8
Qу
             ::||: ||
           1 MKSYISLF 8
Db
RESULT 25
US-09-060-299-403
; Sequence 403, Application US/09060299
; Patent No. 6545137
  GENERAL INFORMATION:
    APPLICANT: Todd, John A
    APPLICANT: Hess, John W
    APPLICANT: Caskey, Charles T
    APPLICANT: Cox, Roger D
;
    APPLICANT: Gerhold, David
    APPLICANT: Hammond, Holly
    APPLICANT: Hey, Patricia
    APPLICANT: Kawaguchi, Yoshihiko
;
    APPLICANT: Merriman, Tony R
    APPLICANT: Metzker, Michael L
    TITLE OF INVENTION: No. 6545137el Receptor
    NUMBER OF SEQUENCES: 455
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Nixon and Vanderhye
      STREET: 1100 No. 6545137th Glebe Road, Eighth Floor
      CITY: Arlington
       STATE: Virginia
       COUNTRY: US
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
       COMPUTER: IBM PC compatible
       OPERATING SYSTEM: PC-DOS/MS-DOS
       SOFTWARE: PatentIn Release #1.0, Version #1.25 (EPO)
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/09/060,299
;
       FILING DATE: 15-APR-1998
;
       CLASSIFICATION: 435
     PRIOR APPLICATION DATA:
      APPLICATION NUMBER: US 60/043,553
       FILING DATE: 15-APR-1997
     PRIOR APPLICATION DATA:
      APPLICATION NUMBER: US 60/048,740
       FILING DATE: 05-JUN-1997
     ATTORNEY/AGENT INFORMATION:
      NAME: B.J.Sadoff
       REGISTRATION NUMBER: 36,663
       REFERENCE/DOCKET NUMBER: 620-35
     TELECOMMUNICATION INFORMATION:
       TELEPHONE: (703)816-4091
       TELEFAX: (703)816-4100
  INFORMATION FOR SEQ ID NO: 403:
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SEQUENCE CHARACTERISTICS:
      LENGTH: 17 amino acids
       TYPE: amino acid
      TOPOLOGY: linear
US-09-060-299-403
                          52.1%; Score 25; DB 4; Length 17;
 Query Match
  Best Local Similarity 71.4%; Pred. No. 2.4e+02;
           5; Conservative 0; Mismatches 2; Indels
                                                                              0;
 Matches
                                                                 0; Gaps
            3 SYVPLFP 9
Qу
             | | | | | |
           1 SYFHLFP 7
Db
RESULT 26
US-09-402-923A-403
; Sequence 403, Application US/09402923A
; Patent No. 6555654
   GENERAL INFORMATION:
        APPLICANT: Todd, John A
                    Hess, John W
                    Caskey, Charles T
                    Cox, Roger D
                    Gerhold, David
                    Hammond, Holly
                    Hey, Patricia
                    Kawaguchi, Yoshihiko
                    Merriman, Tony R
                    Metzker, Michael L
         TITLE OF INVENTION: No. 6555654el LDL-Receptor
         NUMBER OF SEQUENCES: 455
         CORRESPONDENCE ADDRESS:
              ADDRESSEE: Nixon and Vanderhye
              STREET: 1100 No. 6555654th Glebe Road, Eighth Floor
              CITY: Arlington
              STATE: Virginia
              COUNTRY: US
              ZIP: VA 22201-4714
         COMPUTER READABLE FORM:
              MEDIUM TYPE: Floppy disk
              COMPUTER: IBM PC compatible
              OPERATING SYSTEM: PC-DOS/MS-DOS
              SOFTWARE: PatentIn Release #1.0, Version #1.25 (EPO)
         CURRENT APPLICATION DATA:
              APPLICATION NUMBER: US/09/402,923A
              FILING DATE: 14-Feb-2001
         PRIOR APPLICATION DATA:
              APPLICATION NUMBER: PCT/GB98/01102
              FILING DATE: 15-APR-1998
              APPLICATION NUMBER: US 60/043,553
              FILING DATE: 15-APR-1997
              APPLICATION NUMBER: US 60/048,740
              FILING DATE: 05-JUN-1997
         ATTORNEY/AGENT INFORMATION:
              NAME: B.J.Sadoff
              REGISTRATION NUMBER: 36,663
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REFERENCE/DOCKET NUMBER: 620-81
       TELECOMMUNICATION INFORMATION:
             TELEPHONE: (703)816-4091
             TELEFAX: (703)816-4100
  INFORMATION FOR SEQ ID NO: 403:
        SEQUENCE CHARACTERISTICS:
             LENGTH: 17 amino acids
             TYPE: amino acid
             TOPOLOGY: linear
        SEQUENCE DESCRIPTION: SEQ ID NO: 403:
US-09-402-923A-403
 Query Match
                         52.1%; Score 25; DB 4; Length 17;
  Best Local Similarity 71.4%; Pred. No. 2.4e+02;
         5; Conservative 0; Mismatches 2; Indels
                                                              0; Gaps
           3 SYVPLFP 9
Qу
            1 SYFHLFP 7
Db
RESULT 27
US-08-837-593-13
; Sequence 13, Application US/08837593
; Patent No. 5977442
; GENERAL INFORMATION:
    APPLICANT: Klessig, Daniel F.
    APPLICANT: Zhang Zhugun
    TITLE OF INVENTION: "No. 5977442el Salicylic Acid Induced
    TITLE OF INVENTION: Map Kinase and its Use for Enhanced Disease Resistance
in Plants
    NUMBER OF SEQUENCES: 14
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Dann, Dorfman, Herrell and Skillman,
      ADDRESSEE:
                 P.C.
      STREET: 1601 Market Street, Suite 720
      CITY: Philadelphia
      STATE: PA
      COUNTRY: United States of America
      ZIP: 19103-2307
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Diskette
      COMPUTER: IBM Compatible
      OPERATING SYSTEM: DOS
      SOFTWARE: FastSEQ Version 1.5
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/837,593
      FILING DATE: April 21, 1997
      CLASSIFICATION: 536
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: 60/029,805
      FILING DATE: October 25, 1996
    ATTORNEY/AGENT INFORMATION:
      NAME: Reed, Janet E.
      REGISTRATION NUMBER: 36,252
      REFERENCE/DOCKET NUMBER: Rutgers 97-0016
    TELECOMMUNICATION INFORMATION:
```

```
TELEPHONE: (215) 563-4100
;
      TELEFAX: (215) 563-4044
      TELEX:
  INFORMATION FOR SEQ ID NO: 13:
   SEQUENCE CHARACTERISTICS:
      LENGTH: 7 amino acids
ï
      TYPE: amino acid
;
      STRANDEDNESS: single
      TOPOLOGY: linear
    MOLECULE TYPE: peptide
    HYPOTHETICAL: NO
    ANTI-SENSE: NO
    FRAGMENT TYPE: internal
    ORIGINAL SOURCE:
US-08-837-593-13
 Query Match 50.0%; Score 24; DB 2; Length 7; Best Local Similarity 100.0%; Pred. No. 3e+05;
          4; Conservative 0; Mismatches 0; Indels
                                                             0; Gaps
                                                                            0;
 Matches
           6 PLFP 9
Qу
             2 PLFP 5
Db
RESULT 28
US-09-266-764-16
; Sequence 16, Application US/09266764
: Patent No. 6545139
; GENERAL INFORMATION:
  APPLICANT: Baylor College of Medicine
  TITLE OF INVENTION: Compositions and Methods For the Treatment and
  TITLE OF INVENTION: Prevention of Metastatic Disorders
  FILE REFERENCE: 00A146.0122
; CURRENT APPLICATION NUMBER: US/09/266,764
; CURRENT FILING DATE: 1999-03-12
; PRIOR APPLICATION NUMBER: 60/077,934
; PRIOR FILING DATE: 1998-03-13
; NUMBER OF SEQ ID NOS: 27
  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 16
   LENGTH: 9
   TYPE: PRT
   ORGANISM: Mus sp.
US-09-266-764-16
                         50.0%; Score 24; DB 4; Length 9;
  Query Match
  Best Local Similarity 100.0%; Pred. No. 3e+05;
 Matches 4; Conservative 0; Mismatches 0; Indels
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           6 PLFP 9
Qу
             Db
           6 PLFP 9
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RESULT 29 US-08-066-299-3

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; Sequence 3, Application US/08066299
 Patent No. 5445947
  GENERAL INFORMATION:
    APPLICANT:
                James George Metz
    APPLICANT: Kathryn Dennis Lardizabal
    APPLICANT: Michael W. Lassner
    TITLE OF INVENTION: Fatty Acyl CoA: Fatty Alcohol
    TITLE OF INVENTION: O-Acyltransferases
    NUMBER OF SEQUENCES: 12
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Calgene, Inc.
      STREET: 1920 Fifth Street
      CITY: Davis
      STATE: CA
      COUNTRY: USA
       ZIP: 95616
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Diskette, 3.50 inch, 1.0 MB
       COMPUTER: Apple Macintosh
      OPERATING SYSTEM: Macintosh 6.0.7
       SOFTWARE: Microsoft Word 5.1
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/066,299
       FILING DATE: 19930520
       CLASSIFICATION: 435
     PRIOR APPLICATION DATA:
      APPLICATION NUMBER: 07/796,256
       FILING DATE: 20-NOVEMBER-1991
       APPLICATION NUMBER: 07/933,411
       FILING DATE: 21-AUGUST-1992
       APPLICATION NUMBER: PCT/US92/09863
       FILING DATE: 13-NOVEMBER-1992
     ATTORNEY/AGENT INFORMATION:
       NAME: Elizabeth Lassen
       REGISTRATION NUMBER:
                            31,845
       NAME: Donna E. Scherer
       REGISTRATION NUMBER:
                            34,719
       REFERENCE/DOCKET NUMBER: CGNE 98
     TELECOMMUNICATION INFORMATION:
       TELEPHONE: (916) 753-6313
       TELEFAX: (916) 753-1510
   INFORMATION FOR SEQ ID NO:
     SEQUENCE CHARACTERISTICS:
       LENGTH: 10 amino acids
       TYPE: amino acid
       TOPOLOGY: linear
     MOLECULE TYPE: peptide
US-08-066-299-3
                          50.0%; Score 24; DB 1; Length 10;
  Query Match
  Best Local Similarity 80.0%; Pred. No. 2e+02;
                                                  0; Indels
                                                                0; Gaps
                                                                            0;
                              1; Mismatches
            4; Conservative
            2 ESYVP 6
Qy
              1:11
Db
            1 ETYVP 5
```

```
RESULT 30
US-08-362-232-3
; Sequence 3, Application US/08362232
; Patent No. 5641667
  GENERAL INFORMATION:
    APPLICANT:
    TITLE OF INVENTION: Fructosyltransferase Enzyme, Method
    TITLE OF INVENTION: For its Production and DNA Encoding the Enzyme.
    NUMBER OF SEQUENCES: 5
     CORRESPONDENCE ADDRESS:
      ADDRESSEE: Hoffmann & Baron
      STREET: 350 Jericho Turnpike
      CITY: Jericho
      STATE: New York
      COUNTRY: United States of America
       ZIP: 11758
     COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk, 3.5 inch, 1.44 Mb
       COMPUTER: IBM PC compatible
       OPERATING SYSTEM: PC-DOS/MS-DOS
       SOFTWARE: Wordperfect 6.0 for DOS
     CURRENT APPLICATION DATA:
       APPLICATION NUMBER: US/08/362,232
       FILING DATE: 22-December-1994
     PRIOR APPLICATION DATA:
       APPLICATION NUMBER: CU 125/93
       FILING DATE: 23-December-1993
     ATTORNEY/AGENT INFORMATION:
       NAME: Baron, Ronald J.
       REGISTRATION NUMBER: 29,281
       REFERENCE/DOCKET NUMBER: 294-29
     TELECOMMUNICATION INFORMATION:
       TELEPHONE: (516) 822-3550
       TELEFAX: (516) 822-3582
   INFORMATION FOR SEQ ID NO: 3:
     SEQUENCE CHARACTERISTICS:
       LENGTH: 10 amino acids
       TYPE: amino acid
       STRANDEDNESS: unknown
       TOPOLOGY: linear
     MOLECULE TYPE: protein
     HYPOTHETICAL: NO
US-08-362-232-3
  Query Match
                          50.0%; Score 24; DB 1; Length 10;
  Best Local Similarity 100.0%; Pred. No. 2e+02;
                                                                0; Gaps
                              0; Mismatches
                                                0; Indels
  Matches
           4; Conservative
            6 PLFP 9
Qу
              3 PLFP 6
Db
RESULT 31
US-08-265-047-7
```

; Sequence 7, Application US/08265047

```
; Patent No. 5679881
  GENERAL INFORMATION:
    APPLICANT: Metz, James G.
    APPLICANT: Lardizabal, Kathryn D.
    APPLICANT: Lassner, Michael
    TITLE OF INVENTION: Nucleic Acid Sequences Encoding a Plant Cytoplasmic
Protein Inv
    NUMBER OF SEQUENCES: 16
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Calgene, Inc.
      STREET: 1920 Fifth Street
      CITY: Davis
      STATE: CA
      COUNTRY: USA
      ZIP: 95616
    COMPUTER READABLE FORM:
    MEDIUM TYPE: Diskette, 3.50 inch, 1.0 MB
      COMPUTER: Apple Macintosh
      OPERATING SYSTEM: Macintosh 7.0
      SOFTWARE: Microsoft Word 5.1a
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/265,047
      FILING DATE: 23-JUN-94
      CLASSIFICATION: 435
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: 08/160,602
       FILING DATE: 30-NOV-93
       CLASSIFICATION: 435
     PRIOR APPLICATION DATA:
      APPLICATION NUMBER: 07/796,256
       FILING DATE: 20-NOV-91
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: 07/933,411
       FILING DATE: 21-AUG-92
     PRIOR APPLICATION DATA:
       APPLICATION NUMBER: 08/066,299
       FILING DATE: 20-MAY-93
     PRIOR APPLICATION DATA:
       APPLICATION NUMBER: PCT/US92/09863
       FILING DATE: 13-NOV-92
    ATTORNEY/AGENT INFORMATION:
      NAME: Elizabeth Lassen
       REGISTRATION NUMBER: 31,845
       NAME: Donna E. Scherer
       REGISTRATION NUMBER: 34,719
       NAME:
             Carl J. Schwedler
       REGISTRATION NUMBER: 36,924
       REFERENCE/DOCKET NUMBER: CGNE 101-1
     TELECOMMUNICATION INFORMATION:
       TELEPHONE: (916) 753-6313
       TELEFAX: (916) 753-1510
   INFORMATION FOR SEQ ID NO:
     SEQUENCE CHARACTERISTICS:
       LENGTH: 10 residues
       TYPE: amino acids
       TOPOLOGY: linear
    MOLECULE TYPE: peptide
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US-08-265-047-7
                         50.0%; Score 24; DB 1; Length 10;
 Ouery Match
 Best Local Similarity 80.0%; Pred. No. 2e+02;
          4; Conservative 1; Mismatches
                                                0; Indels
                                                                0; Gaps
           2 ESYVP 6
Qу
             1:11
           1 ETYVP 5
Db
RESULT 32
US-08-814-196-3
; Sequence 3, Application US/08814196
; Patent No. 5731173
  GENERAL INFORMATION:
     APPLICANT:
     TITLE OF INVENTION: Fructosyltransferase Enzyme, Method
    TITLE OF INVENTION: For its Production and DNA Encoding the Enzyme.
    NUMBER OF SEQUENCES: 5
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Hoffmann & Baron
      STREET: 350 Jericho Turnpike
      CITY: Jericho
       STATE: New York
       COUNTRY: United States of America
       ZIP: 11758
     COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk, 3.5 inch, 1.44 Mb
       COMPUTER: IBM PC compatible
       OPERATING SYSTEM: PC-DOS/MS-DOS
       SOFTWARE: Wordperfect 6.0 for DOS
     CURRENT APPLICATION DATA:
       APPLICATION NUMBER: US/08/814,196
       FILING DATE: 10-MAR-1997
       CLASSIFICATION: 435
     PRIOR APPLICATION DATA:
       APPLICATION NUMBER: US 08/362,232
       FILING DATE: 22-December-1994
      APPLICATION NUMBER: CU 125/93
       FILING DATE: 23-December-1993
     ATTORNEY/AGENT INFORMATION:
       NAME: Baron, Ronald J.
       REGISTRATION NUMBER: 29,281
       REFERENCE/DOCKET NUMBER: 294-29
     TELECOMMUNICATION INFORMATION:
       TELEPHONE: (516) 822-3550
       TELEFAX: (516) 822-3582
   INFORMATION FOR SEQ ID NO: 3:
     SEQUENCE CHARACTERISTICS:
       LENGTH: 10 amino acids
;
       TYPE: amino acid
       STRANDEDNESS: unknown
       TOPOLOGY: linear
     MOLECULE TYPE: protein
     HYPOTHETICAL: NO
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US-08-814-196-3

0;

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Query Match
                         50.0%; Score 24; DB 1; Length 10;
 Best Local Similarity 100.0%; Pred. No. 2e+02;
           4; Conservative 0; Mismatches 0; Indels
                                                                0; Gaps
                                                                            0;
           6 PLFP 9
Qy
             -1111
           3 PLFP 6
Db
RESULT 33
US-08-630-645-10
; Sequence 10, Application US/08630645
; Patent No. 5948763
  GENERAL INFORMATION:
    APPLICANT: SOTO-JARA, Claudio
    APPLICANT: BAUMANN, Marc
    APPLICANT: FRANGIONE, Blas
    TITLE OF INVENTION: PEPTIDES AND PHARMACEUTICAL COMPOSITIONS
    TITLE OF INVENTION: THEREOF FOR TREATMENT OF DISORDERS OR DISEASES
ASSOCIATED
    TITLE OF INVENTION: WITH PROTEIN FOLDING INTO AMYLOID OR AMYLOID-LIKE
DEPOSITS
    NUMBER OF SEQUENCES: 26
;
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: BROWDY AND NEIMARK
      STREET: 419 Seventh Street, N.W., Suite 400
      CITY: Washington
      STATE: D.C.
      COUNTRY: USA
      ZIP: 20004
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
;
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
      SOFTWARE: PatentIn Release #1.0, Version #1.30
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/630,645
      FILING DATE:
      CLASSIFICATION: 530
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: US 08/478,326
;
      FILING DATE: 06-JUN-1995
    ATTORNEY/AGENT INFORMATION:
      NAME: YUN, Allen C.
      REGISTRATION NUMBER: 37,971
      REFERENCE/DOCKET NUMBER: SOTO-JARA=1
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: 202-628-5197
       TELEFAX: 202-737-3528
   INFORMATION FOR SEQ ID NO: 10:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 10 amino acids
      TYPE: amino acid
      STRANDEDNESS: single
      TOPOLOGY: linear
    MOLECULE TYPE: peptide
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US-08-630-645-10
                         50.0%; Score 24; DB 2; Length 10;
  Query Match
  Best Local Similarity 50.0%; Pred. No. 2e+02;
           3; Conservative 2; Mismatches
                                                1; Indels 0; Gaps
           4 YVPLFP 9
Qy
             1:1:1
           3 YLPYYP 8
Db
RESULT 34
US-08-766-596A-10
; Sequence 10, Application US/08766596A
; Patent No. 6462171
  GENERAL INFORMATION:
    APPLICANT: SOTO-JARA, Claudio
    APPLICANT: BAUMANN, Marc
    APPLICANT: FRANGIONE, Blas
     TITLE OF INVENTION: PEPTIDES AND PHARMACEUTICAL
    TITLE OF INVENTION: COMPOSITIONS THEREOF FOR TREATMENT OF DISORDERS OR
DISEASES
    TITLE OF INVENTION: ASSOCIATED WITH PROTEIN FOLDING INTO AMYLOID OR
AMYLOID-LIKE
    TITLE OF INVENTION: DEPOSITS
     NUMBER OF SEQUENCES: 69
     CORRESPONDENCE ADDRESS:
       ADDRESSEE: BROWDY AND NEIMARK
       STREET: 419 Seventh Street, N.W., Suite 400
       CITY: Washington
       STATE: D.C.
;
       COUNTRY: USA
;
       ZIP: 20004
ï
     COMPUTER READABLE FORM:
       MEDIUM TYPE: Floppy disk
       COMPUTER: IBM PC compatible
;
       OPERATING SYSTEM: PC-DOS/MS-DOS
;
       SOFTWARE: PatentIn Release #1.0, Version #1.30
;
     CURRENT APPLICATION DATA:
;
       APPLICATION NUMBER: US/08/766,596A
;
       FILING DATE:
;
       CLASSIFICATION: 435
;
     PRIOR APPLICATION DATA:
       APPLICATION NUMBER: US 08/630,645
       FILING DATE: 10-APR-1996
     PRIOR APPLICATION DATA:
       APPLICATION NUMBER: US 08/478,326
       FILING DATE: 06-JUN-1995
;
     ATTORNEY/AGENT INFORMATION:
       NAME: YUN, Allen C.
       REGISTRATION NUMBER: 37,971
```

REFERENCE/DOCKET NUMBER: SOTO-JARA=1A

TELECOMMUNICATION INFORMATION: TELEPHONE: 202-628-5197 TELEFAX: 202-737-3528

INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:

;

0;

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LENGTH: 10 amino acids
;
      TYPE: amino acid
      STRANDEDNESS: single
      TOPOLOGY: linear
    MOLECULE TYPE: peptide
US-08-766-596A-10
                         50.0%; Score 24; DB 4; Length 10;
 Query Match
                         50.0%; Pred. No. 2e+02;
  Best Local Similarity
                                                 1; Indels
          3; Conservative
                               2; Mismatches
                                                              0; Gaps
 Matches
           4 YVPLFP 9
Qу
             1:1:1
           3 YLPYYP 8
Db
RESULT 35
PCT-US96-10220-10
; Sequence 10, Application PC/TUS9610220
  GENERAL INFORMATION:
    APPLICANT:
    TITLE OF INVENTION: PEPTIDES AND PHARMACEUTICAL COMPOSITIONS
    TITLE OF INVENTION: THEREOF FOR TREATMENT OF DISORDERS OR DISEASES
ASSOCIATED
    TITLE OF INVENTION: WITH PROTEIN FOLDING INTO AMYLOID OR AMYLOID-LIKE
DEPOSITS
    NUMBER OF SEQUENCES: 26
     CORRESPONDENCE ADDRESS:
      ADDRESSEE: BROWDY AND NEIMARK
       STREET: 419 Seventh Street, N.W., Suite 400
       CITY: Washington
       STATE: D.C.
       COUNTRY: USA
       ZIP: 20004
     COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
       COMPUTER: IBM PC compatible
       OPERATING SYSTEM: PC-DOS/MS-DOS
;
       SOFTWARE: PatentIn Release #1.0, Version #1.30
     CURRENT APPLICATION DATA:
       APPLICATION NUMBER: PCT/US96/10220
;
       FILING DATE:
;
     PRIOR APPLICATION DATA:
       APPLICATION NUMBER: US 08/478,326
       FILING DATE: 06-JUN-1995
     PRIOR APPLICATION DATA:
       APPLICATION NUMBER: US 08/630,645
       FILING DATE: 10-APR-1996
     ATTORNEY/AGENT INFORMATION:
;
       NAME: BROWDY, Roger L.
;
       REGISTRATION NUMBER: 25,618
       REFERENCE/DOCKET NUMBER: SOTO-JARA=1 PCT
     TELECOMMUNICATION INFORMATION:
       TELEPHONE: 202-628-5197
       TELEFAX: 202-737-3528
;
   INFORMATION FOR SEQ ID NO: 10:
     SEQUENCE CHARACTERISTICS:
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LENGTH: 10 amino acids
;
      TYPE: amino acid
       STRANDEDNESS: single
      TOPOLOGY: linear
    MOLECULE TYPE: peptide
PCT-US96-10220-10
                         50.0%; Score 24; DB 5; Length 10;
 Query Match
                         50.0%; Pred. No. 2e+02;
  Best Local Similarity
          3; Conservative
                              2; Mismatches
                                                 1; Indels
                                                                0; Gaps
                                                                            0;
 Matches
           4 YVPLFP 9
Qу
              1:1:1
           3 YLPYYP 8
Dh
RESULT 36
US-08-066-299-1
; Sequence 1, Application US/08066299
: Patent No. 5445947
  GENERAL INFORMATION:
    APPLICANT: James George Metz
    APPLICANT: Kathryn Dennis Lardizabal
    APPLICANT: Michael W. Lassner
    TITLE OF INVENTION: Fatty Acyl CoA: Fatty Alcohol
;
    TITLE OF INVENTION: O-Acyltransferases
    NUMBER OF SEQUENCES: 12
    CORRESPONDENCE ADDRESS:
       ADDRESSEE: Calgene, Inc.
       STREET: 1920 Fifth Street
       CITY: Davis
       STATE: CA
       COUNTRY: USA
;
       ZIP: 95616
     COMPUTER READABLE FORM:
       MEDIUM TYPE: Diskette, 3.50 inch, 1.0 MB
       COMPUTER: Apple Macintosh
       OPERATING SYSTEM: Macintosh 6.0.7
       SOFTWARE: Microsoft Word 5.1
     CURRENT APPLICATION DATA:
       APPLICATION NUMBER: US/08/066,299
       FILING DATE: 19930520
;
       CLASSIFICATION: 435
     PRIOR APPLICATION DATA:
       APPLICATION NUMBER: 07/796,256
       FILING DATE: 20-NOVEMBER-1991
       APPLICATION NUMBER: 07/933,411
       FILING DATE: 21-AUGUST-1992
       APPLICATION NUMBER: PCT/US92/09863
       FILING DATE: 13-NOVEMBER-1992
ï
     ATTORNEY/AGENT INFORMATION:
       NAME: Elizabeth Lassen
       REGISTRATION NUMBER: 31,845
       NAME: Donna E. Scherer
       REGISTRATION NUMBER: 34,719
       REFERENCE/DOCKET NUMBER: CGNE 98
     TELECOMMUNICATION INFORMATION:
```

```
TELEPHONE: (916) 753-6313
;
      TELEFAX: (916) 753-1510
  INFORMATION FOR SEQ ID NO: 1:
    SEQUENCE CHARACTERISTICS:
     LENGTH: 11 amino acids
      TYPE: amino acid
      TOPOLOGY: linear
    MOLECULE TYPE: peptide
US-08-066-299-1
                         50.0%; Score 24; DB 1; Length 11;
  Query Match
  Best Local Similarity
                         80.0%; Pred. No. 2.3e+02;
                             1; Mismatches 0; Indels
                                                                0; Gaps
            4; Conservative
           2 ESYVP 6
Qу
              1:11
           1 ETYVP 5
Db
RESULT 37
US-08-128-971B-6
; Sequence 6, Application US/08128971B
; Patent No. 5525503
  GENERAL INFORMATION:
    APPLICANT: Christopher E. Rudd
    APPLICANT: Prasad Kanteti
    TITLE OF INVENTION: SIGNAL TRANSDUCTION VIA CD28
    NUMBER OF SEQUENCES: 21
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Fish & Richardson
      STREET: 225 Franklin Street
      CITY: Boston
      STATE: Massachusetts
      COUNTRY: U.S.A.
      ZIP: 02110-2804
     COMPUTER READABLE FORM:
      MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
       COMPUTER: IBM PS/2 Model 50Z or 55SX
      OPERATING SYSTEM: MS-DOS (Version 5.0)
       SOFTWARE: WordPerfect (Version 5.1)
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/128,971B
       FILING DATE: September 28, 1993
       CLASSIFICATION: 800
     PRIOR APPLICATION DATA:
      APPLICATION NUMBER:
       FILING DATE:
    ATTORNEY/AGENT INFORMATION:
      NAME: Janis K. Fraser
       REGISTRATION NUMBER: 34,819
       REFERENCE/DOCKET NUMBER: 00530/073001
     TELECOMMUNICATION INFORMATION:
       TELEPHONE: (617) 542-5070
       TELEFAX: (617) 542-8906
       TELEX: 200154
  INFORMATION FOR SEQ ID NO:
     SEQUENCE CHARACTERISTICS:
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LENGTH: 11
;
       TYPE: amino acid
       STRANDEDNESS:
       TOPOLOGY: linear
US-08-128-971B-6
                         50.0%; Score 24; DB 1; Length 11;
 Query Match
                         37.5%; Pred. No. 2.3e+02;
  Best Local Similarity
                                                                0; Gaps
                                                                            0;
           3; Conservative
                                3; Mismatches
                                                2; Indels
           2 ESYVPLFP 9
Qу
             : |:|: |
Db
           2 DGYMPMSP 9
RESULT 38
US-08-265-047-5
; Sequence 5, Application US/08265047
; Patent No. 5679881
  GENERAL INFORMATION:
    APPLICANT: Metz, James G.
    APPLICANT: Lardizabal, Kathryn D.
    APPLICANT: Lassner, Michael
    TITLE OF INVENTION: Nucleic Acid Sequences Encoding a Plant Cytoplasmic
Protein Inv
    NUMBER OF SEQUENCES: 16
    CORRESPONDENCE ADDRESS:
       ADDRESSEE: Calgene, Inc.
       STREET: 1920 Fifth Street
       CITY: Davis
       STATE: CA
       COUNTRY: USA
       ZIP: 95616
     COMPUTER READABLE FORM:
       MEDIUM TYPE: Diskette, 3.50 inch, 1.0 MB
       COMPUTER: Apple Macintosh
       OPERATING SYSTEM: Macintosh 7.0
       SOFTWARE: Microsoft Word 5.1a
     CURRENT APPLICATION DATA:
       APPLICATION NUMBER: US/08/265,047
       FILING DATE: 23-JUN-94
       CLASSIFICATION: 435
     PRIOR APPLICATION DATA:
       APPLICATION NUMBER: 08/160,602
       FILING DATE: 30-NOV-93
       CLASSIFICATION: 435
     PRIOR APPLICATION DATA:
       APPLICATION NUMBER: 07/796,256
       FILING DATE: 20-NOV-91
     PRIOR APPLICATION DATA:
       APPLICATION NUMBER: 07/933,411
       FILING DATE: 21-AUG-92
     PRIOR APPLICATION DATA:
       APPLICATION NUMBER: 08/066,299
       FILING DATE: 20-MAY-93
;
     PRIOR APPLICATION DATA:
       APPLICATION NUMBER: PCT/US92/09863
```

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FILING DATE: 13-NOV-92
;
    ATTORNEY/AGENT INFORMATION:
      NAME: Elizabeth Lassen
      REGISTRATION NUMBER: 31,845
      NAME: Donna E. Scherer
      REGISTRATION NUMBER: 34,719
      NAME: Carl J. Schwedler
      REGISTRATION NUMBER: 36,924
      REFERENCE/DOCKET NUMBER: CGNE 101-1
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: (916) 753-6313
      TELEFAX: (916) 753-1510
  INFORMATION FOR SEQ ID NO: 5:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 11 residues
      TYPE: amino acids
      TOPOLOGY: linear
    MOLECULE TYPE: peptide
US-08-265-047-5
                         50.0%; Score 24; DB 1; Length 11;
  Query Match
  Best Local Similarity 80.0%; Pred. No. 2.3e+02;
                              1; Mismatches 0; Indels
                                                               0; Gaps
 Matches
          4; Conservative
           2 ESYVP 6
Qу
             1:11
           1 ETYVP 5
Db
RESULT 39
US-08-652-877-50
; Sequence 50, Application US/08652877
; Patent No. 6187548
  GENERAL INFORMATION:
    APPLICANT: Akerstrom, Goran
    APPLICANT: Juhlin, Claes
    APPLICANT: Rask, Lars
    APPLICANT: Crumley, Gregg R.
    APPLICANT: Morse, Clarence C.
    APPLICANT: Murray, Edward M.
    APPLICANT: Hjalm, Goran
    TITLE OF INVENTION: Human Calcium Sensor Protein, Fragments
    TITLE OF INVENTION: Thereof and DNA Encoding Same
    NUMBER OF SEQUENCES: 106
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Rhone-Poulenc Rorer Inc.
      STREET: 500 Arcola Rd., 3C43
      CITY: Collegeville
      STATE: PA
      COUNTRY: USA
      ZIP: 19426-0107
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
      COMPUTER: Macintosh
;
      OPERATING SYSTEM: System 7.5.1
      SOFTWARE: Word 6.0 (Patentin)
    CURRENT APPLICATION DATA:
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APPLICATION NUMBER: US/08/652,877
      FILING DATE:
      CLASSIFICATION: 435
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: PCT/US95/15203
      FILING DATE: 22-NOV-1995
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: US 08/344,836
      FILING DATE: 23-NOV-1994
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: US 08/487,314
      FILING DATE: 07-JUNE-1995
    ATTORNEY/AGENT INFORMATION:
      NAME: Savitzky, Martin
      REGISTRATION NUMBER: 29,699
      REFERENCE/DOCKET NUMBER: A1355E-US
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: 610-454-3816
      TELEFAX: 610-454-3808
  INFORMATION FOR SEQ ID NO: 50:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 11 amino acids
      TYPE: amino acid
      STRANDEDNESS:
      TOPOLOGY: linear
;
    MOLECULE TYPE: peptide
    HYPOTHETICAL: NO
    FRAGMENT TYPE: internal
US-08-652-877-50
  Query Match
                         50.0%; Score 24; DB 3; Length 11;
  Best Local Similarity 37.5%; Pred. No. 2.3e+02;
                              3; Mismatches 2; Indels 0; Gaps
 Matches
           3; Conservative
                                                                           0;
QУ
           2 ESYVPLFP 9
             : |:|: |
Db
           4 DGYMPMSP 11
RESULT 40
US-08-476-515A-50
; Sequence 50, Application US/08476515A
; Patent No. 6239270
; GENERAL INFORMATION:
    APPLICANT: Akerstrom, Goran
    APPLICANT: Juhlin, Claes
    APPLICANT: Rask, Lars
    APPLICANT: Crumley, Gregg R.
    APPLICANT: Morse, Clarence C.
    APPLICANT: Murray, Edward M.
    APPLICANT: Hjalm, Goran
    TITLE OF INVENTION: Human Calcium Sensor Protein, Fragments
    TITLE OF INVENTION: Thereof and DNA Encoding Same
    NUMBER OF SEQUENCES: 84
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Martin Savitzky
      STREET: Rhone-Poulenc Rorer Inc., 500 Arcola Rd.;
```

```
STREET: 3C43,
;
      CITY: Collegeville
      STATE: PA
      COUNTRY: USA
      ZIP: 19426-0107
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
      COMPUTER: Compaq PC
      OPERATING SYSTEM: Windows 95
      SOFTWARE: Word 7.0 (Patentin)
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/476,515A
      FILING DATE: 07-JUN-1995
      CLASSIFICATION: 435
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: US 08/344,836
      FILING DATE: 23-NOV-1994
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: WO PCT/SE94/00483
      FILING DATE: 24-MAY-1994
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: SE 9301764-8
      FILING DATE: 24-MAY-1993
    ATTORNEY/AGENT INFORMATION:
      NAME: Savitzky, Martin
      REGISTRATION NUMBER: 29,699
      REFERENCE/DOCKET NUMBER: A1355D
     TELECOMMUNICATION INFORMATION:
      TELEPHONE: 610-454-3816
       TELEFAX: 610-454-3808
   INFORMATION FOR SEQ ID NO:
     SEQUENCE CHARACTERISTICS:
       LENGTH: 11 amino acids
       TYPE: amino acid
       STRANDEDNESS:
       TOPOLOGY: linear
    MOLECULE TYPE: peptide
     HYPOTHETICAL: NO
     FRAGMENT TYPE: internal
US-08-476-515A-50
                         50.0%; Score 24; DB 3; Length 11;
  Query Match
  Best Local Similarity 37.5%; Pred. No. 2.3e+02;
           3; Conservative 3; Mismatches 2; Indels
                                                                0; Gaps
  Matches
Qу
            2 ESYVPLFP 9
              : 1:1: 1
Db
            4 DGYMPMSP 11
RESULT 41
US-08-318-794-1
; Sequence 1, Application US/08318794
; Patent No. 6022726
 GENERAL INFORMATION:
     APPLICANT: Palese, Peter
     TITLE OF INVENTION: GENETICALLY ENGINEERED ATTENUATED
```

```
TITLE OF INVENTION: VIRUSES
    NUMBER OF SEQUENCES: 36
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Pennie & Edmonds
      STREET: 1155 Avenue of the Americas
      CITY: New York
      STATE: New York
      COUNTRY: U.S.A.
      ZIP: 10036-2711
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
      SOFTWARE: PatentIn Release #1.0, Version #1.30
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/318,794
      FILING DATE: 20-DEC-1994
      CLASSIFICATION: 424
    ATTORNEY/AGENT INFORMATION:
      NAME: Coruzzi, Laura A.
      REGISTRATION NUMBER: 30,742
      REFERENCE/DOCKET NUMBER: 7682-019
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: (212) 790-9090
      TELEFAX: (212) 869-9741/8864
      TELEX: 66141 PENNIE
  INFORMATION FOR SEQ ID NO:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 12 amino acids
      TYPE: amino acid
      TOPOLOGY: unknown
    MOLECULE TYPE: peptide
US-08-318-794-1
  Query Match
                         50.0%; Score 24; DB 3; Length 12;
  Best Local Similarity
                         80.0%; Pred. No. 2.5e+02;
           4; Conservative
                                1; Mismatches
                                                 0; Indels
                                                                 0; Gaps
                                                                             0;
           2 ESYVP 6
Qу
              : | | | |
           3 DSYVP 7
Db
RESULT 42
US-08-470-106-1
; Sequence 1, Application US/08470106
; Patent No. 6316243
    GENERAL INFORMATION:
         APPLICANT: Palese, Peter
        TITLE OF INVENTION: GENETICALLY ENGINEERED ATTENUATED
                             VIRUSES
        NUMBER OF SEQUENCES: 36
        CORRESPONDENCE ADDRESS:
              ADDRESSEE: Pennie & Edmonds
              STREET: 1155 Avenue of the Americas
              CITY: New York
              STATE: New York
```

```
COUNTRY: U.S.A.
;
              ZIP: 10036-2711
        COMPUTER READABLE FORM:
             MEDIUM TYPE: Floppy disk
             COMPUTER: IBM PC compatible
             OPERATING SYSTEM: PC-DOS/MS-DOS
              SOFTWARE: PatentIn Release #1.0, Version #1.30
        CURRENT APPLICATION DATA:
             APPLICATION NUMBER: US/08/470,106
             FILING DATE: 06-Jun-1995
             CLASSIFICATION: <Unknown>
        ATTORNEY/AGENT INFORMATION:
             NAME: Coruzzi, Laura A.
             REGISTRATION NUMBER: 30,742
             REFERENCE/DOCKET NUMBER: 7682-025
        TELECOMMUNICATION INFORMATION:
             TELEPHONE: (212) 790-9090
             TELEFAX: (212) 869-9741/8864
             TELEX: 66141 PENNIE
;
   INFORMATION FOR SEQ ID NO: 1:
;
        SEQUENCE CHARACTERISTICS:
             LENGTH: 12 amino acids
;
             TYPE: amino acid
;
             TOPOLOGY: unknown
        MOLECULE TYPE: peptide
        SEQUENCE DESCRIPTION: SEQ ID NO: 1:
US-08-470-106-1
                         50.0%; Score 24; DB 4; Length 12;
  Query Match
  Best Local Similarity 80.0%; Pred. No. 2.5e+02;
          4; Conservative 1; Mismatches 0; Indels 0; Gaps
                                                                             0;
 Matches
           2 ESYVP 6
Qу
             : 1111
Db
           3 DSYVP 7
RESULT 43
US-08-408-604A-37
; Sequence 37, Application US/08408604A
; Patent No. 5801149
  GENERAL INFORMATION:
    APPLICANT: Shoelson, Steven
    TITLE OF INVENTION: INHIBITION OF SIGNAL TRANSDUCTION MOLECULES
    NUMBER OF SEQUENCES: 211
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: LAHIVE & COCKFIELD
       STREET: 60 State Street, Suite 510
;
       CITY: Boston
;
       STATE: Massachusetts
      COUNTRY: USA
       ZIP: 02109-1875
;
     COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
       COMPUTER: IBM PC compatible
;
       OPERATING SYSTEM: PC-DOS/MS-DOS
;
       SOFTWARE: PatentIn Release #1.0, Version #1.25
```

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CURRENT APPLICATION DATA:
;
      APPLICATION NUMBER: US/08/408,604A
;
      FILING DATE: 21-MAR-1995
      CLASSIFICATION: 514
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: US 08/134,558
      FILING DATE: 08-OCT-1993
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: US 07/959,949
      FILING DATE: 09-OCT-1992
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: US 07/722,359
      FILING DATE: 19-JUNE-1991
    ATTORNEY/AGENT INFORMATION:
      NAME: Myers, Louis
      REGISTRATION NUMBER: 35,965
      REFERENCE/DOCKET NUMBER: JDP-014CP3
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: (617)227-7400
      TELEFAX: (617)227-5941
  INFORMATION FOR SEQ ID NO: 37:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 13
      TYPE: amino acid
      STRANDEDNESS: single
      TOPOLOGY: linear
US-08-408-604A-37
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                         50.0%; Score 24; DB 1; Length 13;
 Best Local Similarity 37.5%; Pred. No. 2.7e+02;
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Qу
             : |:|: |
           3 DGYMPMSP 10
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PCT-US93-09626-37
; Sequence 37, Application PC/TUS9309626
  GENERAL INFORMATION:
    APPLICANT:
    TITLE OF INVENTION: INHIBITION OF SIGNAL TRANSDUCTION MOLECULES
    NUMBER OF SEQUENCES: 48
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy Disk
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
      SOFTWARE: ASCII (text)
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: PCT/US93/09626
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: 07/959,949
      FILING DATE: October 9, 1992
      APPLICATION NUMBER: 07/722,359
      FILING DATE: June 19, 1991
 INFORMATION FOR SEQ ID NO: 37:
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SEQUENCE CHARACTERISTICS:
;
       LENGTH: 13
       TYPE: amino acid
       STRANDEDNESS: single
       TOPOLOGY: linear
PCT-US93-09626-37
  Query Match
                          50.0%; Score 24; DB 5; Length 13;
  Best Local Similarity 37.5%; Pred. No. 2.7e+02;
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           3; Conservative
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 Matches
                                                                0; Gaps
         2 ESYVPLFP 9
Qy
              : |:|: |
            3 DGYMPMSP 10
Db
RESULT 45
US-08-103-490A-23
; Sequence 23, Application US/08103490A
; Patent No. 5422341
  GENERAL INFORMATION:
     APPLICANT: Macielag, Mark J.
    TITLE OF INVENTION: Motilin-Like Polypeptides With
TITLE OF INVENTION: Gastrointestinal Motor Stimulating Activity
;
     NUMBER OF SEQUENCES: 173
     CORRESPONDENCE ADDRESS:
       ADDRESSEE: The BOC Group, Inc.
       STREET: 100 Mountain Avenue
       CITY: Murray Hill
       STATE: New Jersey
       COUNTRY: USA
;
       ZIP: 07974
;
     COMPUTER READABLE FORM:
       MEDIUM TYPE: Floppy disk
       COMPUTER: IBM PC compatible
       OPERATING SYSTEM: PC-DOS/MS-DOS
;
       SOFTWARE: PatentIn Release #1.0, Version #1.25
;
     CURRENT APPLICATION DATA:
;
       APPLICATION NUMBER: US/08/103,490A
;
       FILING DATE: 06-AUG-1993
;
       CLASSIFICATION: 514
;
     ATTORNEY/AGENT INFORMATION:
;
       NAME: Swope, R. Hain
       REGISTRATION NUMBER: 24,864
;
       REFERENCE/DOCKET NUMBER: 92H817
     TELECOMMUNICATION INFORMATION:
       TELEPHONE: 908-771-6292
       TELEFAX: 908-771-6159
;
   INFORMATION FOR SEQ ID NO: 23:
     SEQUENCE CHARACTERISTICS:
;
       LENGTH: 14 amino acids
       TYPE: amino acid
;
       STRANDEDNESS: unknown
       TOPOLOGY: unknown
    MOLECULE TYPE: peptide
US-08-103-490A-23
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Query Match 50.0%; Score 24; DB 1; Length 14; Best Local Similarity 80.0%; Pred. No. 2.9e+02;
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Qу
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            1 FVPLF 5
Db
RESULT 46
US-08-103-490A-40
; Sequence 40, Application US/08103490A
; Patent No. 5422341
  GENERAL INFORMATION:
     APPLICANT: Macielag, Mark J.
    TITLE OF INVENTION: Motilin-Like Polypeptides With
TITLE OF INVENTION: Gastrointestinal Motor Stimulating Activity
    NUMBER OF SEQUENCES: 173
   CORRESPONDENCE ADDRESS:
     ADDRESSEE: The BOC Group, Inc.
     STREET: 100 Mountain Avenue
       CITY: Murray Hill
       STATE: New Jersey
       COUNTRY: USA
       ZIP: 07974
    COMPUTER READABLE FORM:
       MEDIUM TYPE: Floppy disk
       COMPUTER: IBM PC compatible
       OPERATING SYSTEM: PC-DOS/MS-DOS
       SOFTWARE: PatentIn Release #1.0, Version #1.25
     CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/103,490A
       FILING DATE: 06-AUG-1993
       CLASSIFICATION: 514
    ATTORNEY/AGENT INFORMATION:
     NAME: Swope, R. Hain
       REGISTRATION NUMBER: 24,864
       REFERENCE/DOCKET NUMBER: 92H817
     TELECOMMUNICATION INFORMATION:
       TELEPHONE: 908-771-6292
       TELEFAX: 908-771-6159
  INFORMATION FOR SEQ ID NO:
    SEQUENCE CHARACTERISTICS:
       LENGTH: 14 amino acids
       TYPE: amino acid
       STRANDEDNESS: unknown
       TOPOLOGY: unknown
     MOLECULE TYPE: peptide
US-08-103-490A-40
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Db
            1 FVPLF 5
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RESULT 47
US-08-602-999A-319
; Sequence 319, Application US/08602999A
; Patent No. 6184205
  GENERAL INFORMATION:
    APPLICANT: SPARKS, Andrew B.
    APPLICANT: KAY, Brian K.
    APPLICANT: THORN, Judith M.
    APPLICANT: QUILLIAM, Lawrence A.
    APPLICANT: DER, Channing J.
    APPLICANT: FOWLKES, Dana M.
    APPLICANT: RIDER, James E.
    TITLE OF INVENTION: SH3 BINDING PEPTIDES AND METHODS OF
    TITLE OF INVENTION: ISOLATING AND USING SAME
    NUMBER OF SEQUENCES: 467
    CORRESPONDENCE ADDRESS:
     ADDRESSEE: Pennie & Edmonds
     STREET: 1155 Avenue of the Americas
     CITY: New York
     STATE: New York
     COUNTRY: U.S.A.
      ZIP: 10036-2711
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
      SOFTWARE: PatentIn Release #1.0, Version #1.30
     CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/602,999A
       FILING DATE: 16-FEB-1996
      CLASSIFICATION: 435
    ATTORNEY/AGENT INFORMATION:
      NAME: Misrock, S. Leslie
      REGISTRATION NUMBER: 18,872
      REFERENCE/DOCKET NUMBER: 1101-202
     TELECOMMUNICATION INFORMATION:
      TELEPHONE: (212) 790-9090
       TELEFAX: (212) 869-9741/8864
       TELEX: 66141 PENNIE
   INFORMATION FOR SEQ ID NO:
    SEQUENCE CHARACTERISTICS:
       LENGTH: 15 amino acids
       TYPE: amino acid
       TOPOLOGY: unknown
     MOLECULE TYPE: peptide
US-08-602-999A-319
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  Matches
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Qу
             : |||: |
Db
           2 DEYVPVPP 9
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RESULT 48
US-08-743-168B-26
; Sequence 26, Application US/08743168B
; Patent No. 6271015
  GENERAL INFORMATION:
    APPLICANT: Gilula, No. 6271015ton B
    APPLICANT: Cravatt, Benjamin F
    APPLICANT: Lerner, Richard A
    TITLE OF INVENTION: FATTY-ACID AMIDE HYDROLASE
    NUMBER OF SEQUENCES: 54
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: The Scripps Research Institute
      STREET: 10550 No. 6271015th Torrey Pines Road
      CITY: La Jolla
      STATE: California
      COUNTRY: US
     ZIP: 92037
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
       COMPUTER: IBM PC compatible
       OPERATING SYSTEM: PC-DOS/MS-DOS
       SOFTWARE: PatentIn Release #1.0, Version #1.25
;
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/743,168B
       FILING DATE: 04-NOV-1996
       CLASSIFICATION: 435
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: US 08/489,535
      FILING DATE: 12-JUN-1995
     ATTORNEY/AGENT INFORMATION:
       NAME: Fitting, Thomas
       REGISTRATION NUMBER: 34,163
       REFERENCE/DOCKET NUMBER: TSRI 485.2
     TELECOMMUNICATION INFORMATION:
       TELEPHONE: (619) 784-2937
       TELEFAX: (619) 784-9399
   INFORMATION FOR SEQ ID NO: 26:
     SEQUENCE CHARACTERISTICS:
;
       LENGTH: 15 amino acids
;
       TYPE: amino acid
       TOPOLOGY: linear
     MOLECULE TYPE: peptide
     FRAGMENT TYPE: internal
US-08-743-168B-26
                         50.0%; Score 24; DB 3; Length 15;
  Query Match
  Best Local Similarity 100.0%; Pred. No. 3.1e+02;
            4; Conservative 0; Mismatches 0; Indels
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            6 PLFP 9
Qу
              1111
           12 PLFP 15
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RESULT 49 US-08-743-168B-27

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; Sequence 27, Application US/08743168B
; Patent No. 6271015
  GENERAL INFORMATION:
    APPLICANT: Gilula, No. 6271015ton B
    APPLICANT: Cravatt, Benjamin F
    APPLICANT: Lerner, Richard A
    TITLE OF INVENTION: FATTY-ACID AMIDE HYDROLASE
    NUMBER OF SEQUENCES: 54
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: The Scripps Research Institute
      STREET: 10550 No. 6271015th Torrey Pines Road
      CITY: La Jolla
      STATE: California
      COUNTRY: US
      ZIP: 92037
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
      SOFTWARE: PatentIn Release #1.0, Version #1.25
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/743,168B
      FILING DATE: 04-NOV-1996
      CLASSIFICATION: 435
;
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: US 08/489,535
      FILING DATE: 12-JUN-1995
    ATTORNEY/AGENT INFORMATION:
      NAME: Fitting, Thomas
      REGISTRATION NUMBER: 34,163
      REFERENCE/DOCKET NUMBER: TSRI 485.2
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: (619) 784-2937
      TELEFAX: (619) 784-9399
  INFORMATION FOR SEQ ID NO: 27:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 15 amino acids
      TYPE: amino acid
      TOPOLOGY: linear
    MOLECULE TYPE: peptide
    FRAGMENT TYPE: internal
US-08-743-168B-27
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  Best Local Similarity 100.0%; Pred. No. 3.1e+02;
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Db
           2 PLFP 5
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US-09-500-124-319
; Sequence 319, Application US/09500124
; Patent No. 6432920
; GENERAL INFORMATION:
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APPLICANT: SPARKS, Andrew B. APPLICANT: KAY, Brian K.
;
    APPLICANT: THORN, Judith M.
    APPLICANT: QUILLIAM, Lawrence A.
    APPLICANT: DER, Channing J.
    APPLICANT: FOWLKES, Dana M.
    APPLICANT: RIDER, James E.
;
    TITLE OF INVENTION: SH3 BINDING PEPTIDES AND METHODS OF
;
    TITLE OF INVENTION: ISOLATING AND USING SAME
;
    NUMBER OF SEQUENCES: 467
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Pennie & Edmonds
      STREET: 1155 Avenue of the Americas
      CITY: New York
      STATE: New York
;
      COUNTRY: U.S.A.
;
      ZIP: 10036-2711
;
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
      COMPUTER: IBM PC compatible
;
      OPERATING SYSTEM: PC-DOS/MS-DOS
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      SOFTWARE: PatentIn Release #1.0, Version #1.30
    CURRENT APPLICATION DATA:
;
      APPLICATION NUMBER: US/09/500,124
;
      FILING DATE:
;
      CLASSIFICATION:
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: 08/602,999
      FILING DATE: 16-FEB-1996
    ATTORNEY/AGENT INFORMATION:
      NAME: Misrock, S. Leslie
      REGISTRATION NUMBER: 18,872
      REFERENCE/DOCKET NUMBER: 1101-202
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: (212) 790-9090
      TELEFAX: (212) 869-9741/8864
      TELEX: 66141 PENNIE
  INFORMATION FOR SEQ ID NO: 319:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 15 amino acids
      TYPE: amino acid
      TOPOLOGY: unknown
    MOLECULE TYPE: peptide
US-09-500-124-319
 Query Match
                         50.0%; Score 24; DB 4; Length 15;
 Best Local Similarity 50.0%; Pred. No. 3.1e+02;
          4; Conservative 2; Mismatches 2; Indels 0; Gaps
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Qy
          2 ESYVPLFP 9
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           2 DEYVPVPP 9
Db
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Search completed: July 4, 2004, 04:48:52 Job time: 6.64179 secs

## GenCore version 5.1.6 Copyright (c) 1993 - 2004 Compugen Ltd.

OM protein - protein search, using sw model

Run on: July 4, 2004, 04:35:16; Search time 6.91791 Seconds

(without alignments)

125.142 Million cell updates/sec

Title: US-09-641-802-31

Perfect score: 48

Sequence: 1 VESYVPLFP 9

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 283366 seqs, 96191526 residues

Total number of hits satisfying chosen parameters: 2898

Minimum DB seq length: 7
Maximum DB seq length: 18

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 100 summaries

Database: PIR\_78:\*

1: pir1:\*

2: pir2:\*

3: pir3:\*

4: pir4:\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

#### SUMMARIES

|        |       | ક્ર   |        |    |        |                    |
|--------|-------|-------|--------|----|--------|--------------------|
| Result |       | Query |        |    |        |                    |
| No.    | Score | Match | Length | DB | ID     | Description        |
| 1      | 25    | 52.1  | 11     | 2  | I33098 | 173K exoantigen -  |
| 2      | 25    | 52.1  | 18     | 2  | S36121 | lectin - spurge (E |
| 3      | 23    | 47.9  | 15     | 2  | B41868 | hypothetical prote |
| 4      | 23    | 47.9  | 18     | 2  | A54651 | insulin-like growt |
| 5      | 21    | 43.8  | 11     | 2  | 160434 | 68kDa neurofilamen |
| 6      | 21    | 43.8  | 12     | 2  | A61503 | sterol carrier pro |
| 7      | 21    | 43.8  | 14     | 2  | D61308 | hemocyanin chain 5 |
| 8      | 21    | 43.8  | 15     | 2  | B59045 | alpha-conotoxin Au |
| 9      | 21    | 43.8  | 15     | 2  | S29485 | GTP-binding protei |
| 10     | 21    | 43.8  | 16     | 2  | C59045 | alpha-conotoxin Au |
| 11     | 21    | 43.8  | 16     | 2  | A59045 | alpha-conotoxin Au |
| 12     | 21    | 43.8  | 18     | 2  | S56715 | hydroxymethylgluta |
| 13     | 20    | 41.7  | 10     | 2  | D28027 | protein P7 - curle |
|        |       |       |        |    |        |                    |

| 14 | 20       | 41.7         | 11       | 2      | PN0042                   | stathmin - mouse ( |
|----|----------|--------------|----------|--------|--------------------------|--------------------|
| 15 | 20       | 41.7         | 14       | 2      | A61308                   | hemocyanin chain 2 |
| 16 | 20       | 41.7         | 15       | 2      | B59137                   | protein Pf1 - gold |
| 17 | 20       | 41.7         | 18       | 2      | A28027                   | protein P2 - curle |
| 18 | 20       | 41.7         | 18       | 2      | B35910                   | neurofibromatosis- |
| 19 | 19       | 39.6         | 13       | 2      | S01119                   | photosystem II pro |
| 20 | 19       | 39.6         | 13       | 2      | S21152                   | tryptophyllin-rela |
| 21 | 19       | 39.6         | 13       | 2      | A05174                   | tryptophyllin-13 - |
| 22 | 19       | 39.6         | 14       | 2      | S22236                   | lipoxygenase (EC 1 |
| 23 | 19       | 39.6         | 15       | 2      | S77988                   | cytochrome-c oxida |
| 24 | 19       | 39.6         | 16       | 2      | B36300                   | T-cell receptor de |
| 25 | 19       | 39.6         | 17       | 2      | S59481                   | hydroxyproline-ric |
| 26 | 19       | 39.6         | 18       | 2      | S09731 .                 | photosystem I prot |
| 27 | 18.5     | 38.5         | 14       | 2      | PL0152                   | metal-binding prot |
| 28 | 18       | 37.5         | 9        | 2      | A60356                   | 118K stomach cance |
| 29 | 18       | 37.5         | 11       | 2      | S78026                   | ribosomal protein  |
| 30 | 18       | 37.5         | 12       | 2      | S01122                   | photosystem II 3.7 |
| 31 | 18       | 37.5         | 12       | 2      | S74196                   | 3-hydroxy-3-methyl |
| 32 | 18       | 37.5         | 13       | 2      | A59387                   | VCAM-1 5'UTR bindi |
| 33 | 18       | 37.5         | 13       | 2      | PH0805                   | T-cell receptor al |
| 34 | 18       | 37.5         | 13       | 2      | 177387                   | AMP deaminase - ra |
| 35 | 18       | 37.5         | 13       | 2      | PC4391                   | cysteine proteinas |
| 36 | 18       | 37.5         | 13       | 2      | PH1566                   | cerebrin 30 - huma |
|    |          |              |          | 2      |                          | dystrophin-associa |
| 37 | 18       | 37.5         | 14       | 2      | PN0666<br>C5913 <b>7</b> | protein Pf3 - gold |
| 38 | 18       | 37.5         | 14<br>15 | 1      |                          | phe operon leader  |
| 39 | 18       | 37.5         | 15       | 2      | LFECF                    | chlorophyll a/b-bi |
| 40 | 18<br>18 | 37.5<br>37.5 | 15<br>15 | 2      | PW0004                   | dystrophin-associa |
| 41 |          |              | 15<br>16 | 2      | PN0665                   | photosystem I chai |
| 42 | 18       | 37.5         | 16       |        | T09741                   |                    |
| 43 | 18       | 37.5         | 16       | 2      | S38292                   | 30K allergen - rye |
| 44 | 18       | 37.5         | 17       | 2      | S17274                   | ribosomal protein  |
| 45 | 18       | 37.5         | 18       | 2<br>2 | I52614                   | u-plasminogen acti |
| 46 | 18       | 37.5         | 18       |        | JP0102                   | fibrinogen beta ch |
| 47 | 17       | 35.4         | 11       | 2      | A57458                   | gene Gax protein - |
| 48 | 17       | 35.4         | 11       | 2      | A58838                   | hemolysin - Porphy |
| 49 | 17       | 35.4         | 12       | 2      | JU0356                   | cycloleonurinin -  |
| 50 | 17       | 35.4         | 13       | 2      | S78766                   | ribosomal protein  |
| 51 | 17       | 35.4         | 13       | 2      | PH0756                   | T-cell receptor be |
| 52 | 17       | 35.4         | 14       | 2      | S29209                   | avenin alpha-2 - o |
| 53 | 17       | 35.4         | 14       | 2      | B36079                   | hypothetical prote |
| 54 | 17       | 35.4         | 14       | 2      | B20872                   | alpha-2-macroglobu |
| 55 | 17       | 35.4         | 14       | 2      | PH1614                   | Ig H chain V-D-J r |
| 56 | 17       | 35.4         | 15       | 2      | S29207                   | avenin gamma-4 - o |
| 57 | 17       | 35.4         | 15       | 2      | PS0455                   | superoxide dismuta |
| 58 | 17       | 35.4         | 15       | 2      | PA0055                   | protein QF200007 - |
| 59 | 17       | 35.4         | 15       | . 2    | PH0772                   | T-cell receptor be |
| 60 | 17       | 35.4         | 16       | 2      | C61414                   | chymotrypsin (EC 3 |
| 61 | 17       | 35.4         | 16       | 2      | PH0749                   | T-cell receptor be |
| 62 | 17       | 35.4         | 16       | 2      | B40291                   | cytochrome P450mtf |
| 63 | 17       | 35.4         | 17       | 2      | B31435                   | adherence lectin l |
| 64 | 17       | 35.4         | 17       | 2      | A61557                   | major merozoite su |
| 65 | 17       | 35.4         | 17       | 2      | S60171                   | sex-lethal protein |
| 66 | 17       | 35.4         | 17       | 2      | B61414                   | chymotrypsin (EC 3 |
| 67 | 17       | 35.4         | 17       | 2      | PH1312                   | Ig heavy chain DJ  |
| 68 | 17       | 35.4         | 18       | 2      | S57518                   | T cell receptor be |
| 69 | 16       | 33.3         | 7        | 2      | A61081                   | tryptophyllin, bas |
| 70 | 16       | 33.3         | 9        | 2      | S66419                   | tetrameric protein |
|    |          |              |          |        |                          |                    |

| 71  | 16   | 33.3 | 9  | 2 | PT0324 | Ig heavy chain CRD |
|-----|------|------|----|---|--------|--------------------|
| 72  | 16   | 33.3 | 10 | 2 | S23307 | neurokinin A - rai |
| 73  | 16   | 33.3 | 10 | 2 | S23186 | neurokinin A - Atl |
| 74  | 16   | 33.3 | 11 | 2 | D61033 | ranatachykinin D - |
| 75  | 16   | 33.3 | 11 | 2 | S04875 | nifS protein - Bra |
| 76  | 16   | 33.3 | 11 | 2 | A26120 | 6-phosphofructokin |
| 77  | 16   | 33.3 | 13 | 2 | A60458 | protocatechuate 3, |
| 78  | 16   | 33.3 | 13 | 2 | B26093 | microbial collagen |
| 79  | 16   | 33.3 | 13 | 2 | S47388 | T-cell antigen rec |
| 80  | 16   | 33.3 | 14 | 2 | S38307 | DEB-A protein - fr |
| 81  | 16   | 33.3 | 14 | 2 | S00150 | ovostatin - duck ( |
| 82  | 16   | 33.3 | 14 | 2 | PH1806 | T cell receptor al |
| 83  | 16   | 33.3 | 15 | 2 | S20410 | protein kinase (EC |
| 84  | 16   | 33.3 | 15 | 2 | PA0027 | protein QA100006 - |
| 85  | 16   | 33.3 | 15 | 2 | A36279 | chemoattractant pr |
| 86  | 16   | 33.3 | 15 | 2 | A41436 | alpha-macroglobuli |
| 87  | 16   | 33.3 | 15 | 2 | B41436 | ovostatin – green  |
| 88  | 16   | 33.3 | 16 | 2 | S21184 | hemocyte proteinas |
| 89  | 16   | 33.3 | 16 | 2 | A20190 | hypodermin B – ear |
| 90  | 16   | 33.3 | 16 | 2 | A42411 | myosin light chain |
| 91  | 16   | 33.3 | 16 | 2 | A45454 | ankyrin-binding gl |
| 92  | 16   | 33.3 | 16 | 4 | A33171 | hypothetical prote |
| 93  | 16   | 33.3 | 17 | 2 | s57519 | T cell receptor be |
| 94  | 16   | 33.3 | 17 | 2 | s57556 | T cell receptor be |
| 95  | 16   | 33.3 | 17 | 2 | A35550 | adrenocortical cel |
| 96  | 16   | 33.3 | 18 | 2 | B49215 | urease (EC 3.5.1.5 |
| 97  | 15.5 | 32.3 | 18 | 2 | S40502 | 20-alpha-hydroxyst |
| 98  | 15   | 31.2 | 8  | 2 | G33098 | 205K exoantigen -  |
| 99  | 15   | 31.2 | 8  | 2 | S10783 | enamelin f - bovin |
| 100 | 15   | 31.2 | 8  | 4 | I54017 | granulocyte-colony |

### ALIGNMENTS

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RESULT 1
I33098
173K exoantigen - malaria parasite (Plasmodium falciparum) (fragments)
C; Species: Plasmodium falciparum
C;Date: 24-Aug-1990 #sequence revision 24-Aug-1990 #text_change 09-Jun-2000
C; Accession: I33098
R; Nichols, J.H.; Hager, L.P.
submitted to the Protein Sequence Database, May 1990
A; Reference number: A33098
A; Accession: I33098
A; Status: preliminary
A; Molecule type: protein
A; Residues: 1-11 <NIC>
                          52.1%; Score 25; DB 2; Length 11;
  Query Match
  Best Local Similarity 80.0%; Pred. No. 97;
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                                                    0; Indels
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 Matches
            4; Conservative
                                 1; Mismatches
            5 VPLFP 9
Qу
              : | | | |
Db
            6 LPLFP 10
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```
RESULT 2
S36121
lectin - spurge (Euphorbia characias)
C; Species: Euphorbia characias
C;Date: 09-Dec-1993 #sequence revision 27-Feb-1997 #text change 13-Mar-1997
C; Accession: S36121
R; Stirpe, F.; Licastro, F.; Morini, M.C.; Parente, A.; Savino, G.; Abbondanza,
A.; Bolognesi, A.; Falasca, A.I.; Rossi, C.A.
Biochim. Biophys. Acta 1158, 33-39, 1993
A; Title: Purification and partial characterization of a mitogenic lectin from
the latex of Euphorbia marginata.
A; Reference number: $36120; MUID: 93357266; PMID: 8353129
A; Accession: S36121
A; Status: preliminary
A; Molecule type: protein
A; Residues: 1-18 <SNI>
                          52.1%; Score 25; DB 2; Length 18;
  Query Match
                          66.7%; Pred. No. 1.6e+02;
  Best Local Similarity
                                1; Mismatches
                                                  1; Indels
                                                                  0; Gaps
                                                                               0;
  Matches
            4; Conservative
            2 ESYVPL 7
Qy
              111 1:
            2 ESYTPI 7
Db
RESULT 3
B41868
hypothetical protein (traE1 3' region) - Enterococcus faecalis plasmid pAD1
C; Species: Enterococcus faecalis
C;Date: 04-Mar-1993 #sequence_revision 18-Nov-1994 #text change 15-Oct-1999
C; Accession: B41868; B37391
R; Pontius, L.T.; Clewell, D.B.
J. Bacteriol. 174, 3152-3160, 1992
A; Title: Conjugative transfer of Enterococcus faecalis plasmid pAD1: nucleotide
sequence and transcriptional fusion analysis of a region involved in positive
regulation.
A; Reference number: A41868; MUID: 92250408; PMID: 1315730
A; Contents: plasmid pAD1
A; Accession: B41868
A; Status: preliminary
A; Molecule type: DNA
A; Residues: 1-15 < PON>
A; Note: sequence extracted from NCBI backbone (NCBIN:99901, NCBIP:99906)
R;Clewell, D.B.; Pontius, L.T.; An, F.Y.; Ike, Y.; Suzuki, A.; Nakayama, J.
Plasmid 24, 156-161, 1990
A; Title: Nucleotide sequence of the sex pheromone inhibitor (iAD1) determinant
of Enterococcus faecalis conjugative plasmid pAD1.
A; Reference number: A37391; MUID: 91261999; PMID: 2128961
A; Accession: B37391
A; Status: preliminary
A; Molecule type: DNA
A; Residues: 1-15 <CLE>
A;Cross-references: GB:M62888; NID:g141853; PIDN:AAA98040.1; PID:g141855
C; Genetics:
A; Genome: plasmid
```

```
Query Match
                          47.9%; Score 23; DB 2; Length 15;
  Best Local Similarity 50.0%; Pred. No. 3.3e+02;
            4; Conservative 1; Mismatches
  Matches
                                                 3; Indels
                                                                  0; Gaps 0;
            1 VESYVPLF 8
Qy
             1 1:1 1
            4 VHVYIPRF 11
Db
RESULT 4
A54651
insulin-like growth factor-binding protein 22K form - human (fragment)
C; Species: Homo sapiens (man)
C; Date: 13-Oct-1994 #sequence revision 18-Nov-1994 #text change 11-Apr-1995
C; Accession: A54651
R; Roghani, M.; Segovia, B.; Whitechurch, O.; Binoux, M.
Growth Regul. 1, 125-130, 1991
A; Title: Purification from human cerebrospinal fluid of insulin-like growth
factor binding proteins (IGFBPs). Isolation of IGFBP-2, an altered form of
IGFBP-3 and a new IGFBP species.
A; Reference number: A54651; MUID: 93091816; PMID: 1726837
A; Accession: A54651
A; Status: preliminary
A; Molecule type: protein
A; Residues: 1-18 < ROG>
A; Experimental source: cerebrospinal fluid
A; Note: sequence extracted from NCBI backbone (NCBIP:121074)
  Query Match
                          47.9%; Score 23; DB 2; Length 18;
  Best Local Similarity
                          50.0%; Pred. No. 4e+02;
            4; Conservative 2; Mismatches
                                                   2; Indels
                                                                  0; Gaps
                                                                              0:
Qу
            2 ESYVPLFP 9
              :|:|| |
            1 DSFVPXEP 8
Db
RESULT 5
T60434
68kDa neurofilament - rat (fragment)
C; Species: Rattus norvegicus (Norway rat)
C; Date: 02-Aug-1996 #sequence revision 02-Aug-1996 #text change 05-Nov-1999
C; Accession: I60434
R; Reeben, M.; Neuman, T.; Palgi, J.; Palm, K.; Paalme, V.; Saarma, M.
J. Neurosci. Res. 40, 177-188, 1995
A; Title: Characterization of the rat light neurofilament (NF-L) gene promoter
and identification of NGF and cAMP responsive regions.
A; Reference number: 160434; MUID: 95264348; PMID: 7745611
A; Accession: I60434
A; Status: preliminary; translated from GB/EMBL/DDBJ
A; Molecule type: DNA
A; Residues: 1-11 < RES>
A; Cross-references: EMBL: X53981; NID: q452676; PIDN: CAA37931.1; PID: q452677
C; Genetics:
A; Gene: NF68
```

```
43.8%; Score 21; DB 2; Length 11;
  Ouery Match
  Best Local Similarity 66.7%; Pred. No. 5.9e+02;
            4; Conservative
                              0; Mismatches
                                                              0; Gaps
                                                2; Indels
                                                                          0:
           3 SYVPLF 8
Qу
             5 SYEPYF 10
Db
RESULT 6
A61503
sterol carrier protein-2-like protein - chicken (fragment)
C; Species: Gallus gallus (chicken)
C; Date: 15-Oct-1994 #sequence revision 15-Oct-1994 #text change 11-May-2000
C; Accession: A61503
R; Reinhart, M.P.; Avart, S.J.; Foglia, T.
Comp. Biochem. Physiol. B 100, 243-248, 1991
A; Title: Purification, characterization and comparison with mammalian SCP-2 of a
chicken SCP-2-like protein.
A; Reference number: A61503; MUID: 92191564; PMID: 1799965
A; Accession: A61503
A; Status: preliminary
A; Molecule type: protein
A; Residues: 1-12 <REI>
  Query Match
                         43.8%; Score 21; DB 2; Length 12;
  Best Local Similarity 75.0%; Pred. No. 6.4e+02;
 Matches
          3; Conservative 1; Mismatches 0; Indels
                                                                0; Gaps
                                                                            0;
           6 PLFP 9
Qу
             11:1
Db
           3 PLYP 6
RESULT 7
D61308
hemocyanin chain 5A - Sahara scorpion (fragment)
C; Species: Androctonus australis (Sahara scorpion)
C;Date: 17-Jul-1994 #sequence revision 17-Jul-1994 #text change 07-May-1999
C; Accession: D61308
R; Jolles, J.; Jolles, P.; Lamy, J.; Lamy, J.
FEBS Lett. 106, 289-291, 1979
A; Title: Structural characterization of seven different subunits in Androctonus
australis haemocyanin.
A; Reference number: A61308; MUID: 80047238; PMID: 499512
A; Accession: D61308
A; Status: preliminary
A; Molecule type: protein
A; Residues: 1-14 <JOL>
  Query Match
                         43.8%; Score 21; DB 2; Length 14;
  Best Local Similarity
                         57.1%; Pred. No. 7.6e+02;
 Matches
          4; Conservative 1; Mismatches 2; Indels
                                                                0; Gaps
                                                                            0;
           2 ESYVPLF 8
Qу
             | :|||
           7 ERLLPLF 13
Db
```

```
RESULT 8
B59045
alpha-conotoxin AuIB - cone shell (Conus aulicus)
C; Species: Conus aulicus (court cone)
C;Date: 23-Jul-1999 #sequence_revision 23-Jul-1999 #text change 23-Jul-1999
C; Accession: B59045
R; Luo, S.; Kulak, J.M.; Cartier, G.E.; Jacobsen, R.B.; Yoshikami, D.; Olivera,
B.M.; McIntosh, J.M.
J. Neurosci. 18, 8571-8579, 1998
A; Title: Alpha-conotoxin AuIB selectively blocks alpha3beta4 nicotinic
acetylcholine receptors and nicotine-evoked norepinephrine release.
A; Reference number: A59045; MUID: 99003392; PMID: 9786965
A; Accession: B59045
A; Status: preliminary
A; Molecule type: protein
A; Residues: 1-15 <LUO>
C; Superfamily: alpha-conotoxin
C; Keywords: acetylcholine receptor inhibitor; amidated carboxyl end;
postsynaptic neurotoxin; venom
F;1-15/Product: alpha-conotoxin AuIB #status experimental <MAT>
F;2-8,3-15/Disulfide bonds: #status experimental
F;15/Modified site: amidated carboxyl end (Cys) #status experimental
  Query Match
                          43.8%; Score 21; DB 2; Length 15;
                          66.7%; Pred. No. 8.1e+02;
  Best Local Similarity
                                                                              0;
  Matches
             4; Conservative
                                0; Mismatches
                                                  2; Indels
                                                                  0; Gaps
            3 SYVPLF 8
Qy
              \square
Db
            4 SYPPCF 9
RESULT 9
S29485
GTP-binding protein o-ral - Pacific electric ray (fragment)
C; Species: Torpedo californica (Pacific electric ray)
C;Date: 22-Nov-1993 #sequence revision 27-Feb-1997 #text change 13-Mar-1997
C; Accession: S29485
R; Volknandt, W.; Pevsner, J.; Elferink, L.A.; Scheller, R.H.
FEBS Lett. 317, 53-56, 1993
A; Title: Association of three small GTP-binding proteins with cholinergic
synaptic vesicles.
A; Reference number: S29485; MUID: 93154521; PMID: 8428634
A; Accession: S29485
A; Status: preliminary
A; Molecule type: protein
A; Residues: 1-15 < VOL>
                          43.8%; Score 21; DB 2; Length 15;
  Query Match
                          66.7%; Pred. No. 8.1e+02;
  Best Local Similarity
            4; Conservative 0; Mismatches
                                                 2; Indels
                                                                  0; Gaps
  Matches
            1 VESYVP 6
Qу
              +1 +1
            6 VEDYEP 11
Db
```

```
RESULT 10
C59045
alpha-conotoxin AuIC - cone shell (Conus aulicus)
C; Species: Conus aulicus (court cone)
C;Date: 23-Jul-1999 #sequence revision 23-Jul-1999 #text change 23-Jul-1999
C; Accession: C59045
R; Luo, S.; Kulak, J.M.; Cartier, G.E.; Jacobsen, R.B.; Yoshikami, D.; Olivera,
B.M.; McIntosh, J.M.
J. Neurosci. 18, 8571-8579, 1998
A; Title: Alpha-conotoxin AuIB selectively blocks alpha3beta4 nicotinic
acetylcholine receptors and nicotine-evoked norepinephrine release.
A; Reference number: A59045; MUID: 99003392; PMID: 9786965
A; Accession: C59045
A; Status: preliminary
A; Molecule type: protein
A; Residues: 1-16 <LUO>
C; Superfamily: alpha-conotoxin
C; Keywords: acetylcholine receptor inhibitor; amidated carboxyl end;
postsynaptic neurotoxin; venom
F;1-16/Product: alpha-conotoxin AuIC #status experimental <MAT>
F;2-8,3-16/Disulfide bonds: #status experimental
F;16/Modified site: amidated carboxyl end (Cys) #status experimental
  Query Match
                          43.8%; Score 21; DB 2; Length 16;
  Best Local Similarity
                          66.7%; Pred. No. 8.7e+02;
  Matches
            4; Conservative
                                 0; Mismatches
                                                    2; Indels
                                                                  0; Gaps
                                                                               0;
            3 SYVPLF 8
Qy
              | | | |
Db
            4 SYPPCF 9
RESULT 11
A59045
alpha-conotoxin AuIA - cone shell (Conus aulicus)
C; Species: Conus aulicus (court cone)
C;Date: 23-Jul-1999 #sequence revision 23-Jul-1999 #text change 23-Jul-1999
C; Accession: A59045
R; Luo, S.; Kulak, J.M.; Cartier, G.E.; Jacobsen, R.B.; Yoshikami, D.; Olivera,
B.M.; McIntosh, J.M.
J. Neurosci. 18, 8571-8579, 1998
A; Title: Alpha-conotoxin AuIB selectively blocks alpha3beta4 nicotinic
acetylcholine receptors and nicotine-evoked norepinephrine release.
A; Reference number: A59045; MUID: 99003392; PMID: 9786965
A; Accession: A59045
A; Status: preliminary
A; Molecule type: protein
A; Residues: 1-16 <LUO>
C; Superfamily: alpha-conotoxin
C; Keywords: acetylcholine receptor inhibitor; amidated carboxyl end;
postsynaptic neurotoxin; venom
F;1-16/Product: alpha-conotoxin AuIA #status experimental <MAT>
F;2-8,3-16/Disulfide bonds: #status experimental
F;16/Modified site: amidated carboxyl end (Cys) #status experimental
```

```
43.8%; Score 21; DB 2; Length 16;
  Query Match
  Best Local Similarity
                          66.7%; Pred. No. 8.7e+02;
                                                 2; Indels 0; Gaps
            4; Conservative
                                0; Mismatches
                                                                             0;
            3 SYVPLF 8
Qу
              +1 + +
            4 SYPPCF 9
Db
RESULT 12
S56715
hydroxymethylglutaryl-CoA reductase (NADPH2) (EC 1.1.1.34) (clone hmg3.2) -
potato (fragment)
C; Species: Solanum tuberosum (potato)
C;Date: 06-Dec-1996 #sequence revision 13-Mar-1997 #text change 03-Jun-2002
C; Accession: S56715
R; Bhattacharyya, M.K.; Paiva, N.L.; Dixon, R.A.; Korth, K.L.; Stermer, B.A.
Plant Mol. Biol. 28, 1-15, 1995
A; Title: Features of the hmg 1 subfamily of genes encoding HMG-CoA reductase in
potato.
A; Reference number: S56710; MUID: 95306778; PMID: 7787174
A; Accession: S56715
A; Status: preliminary
A; Molecule type: mRNA
A; Residues: 1-18 <BHA>
A; Cross-references: EMBL:L34830; NID:q529524; PIDN:AAC37437.1; PID:q553101
C; Superfamily: hydroxymethylglutaryl-CoA reductase (NADPH)
C; Keywords: coenzyme A; oxidoreductase
  Ouerv Match
                          43.8%; Score 21; DB 2; Length 18;
  Best Local Similarity 75.0%; Pred. No. 9.9e+02;
 Matches
            3; Conservative 1; Mismatches
                                                0; Indels
                                                                 0; Gaps
                                                                             0;
QУ
            6 PLFP 9
              11:1
Db
          10 PLYP 13
RESULT 13
D28027
protein P7 - curled-leaved tobacco (fragment)
C; Species: Nicotiana plumbaginifolia (curled-leaved tobacco)
C;Date: 19-May-1989 #sequence_revision 19-May-1989 #text_change 18-Jun-1993
C; Accession: D28027
R; Bauw, G.; De Loose, M.; Inze, D.; Van Montagu, M.; Vandekerckhove, J.
Proc. Natl. Acad. Sci. U.S.A. 84, 4806-4810, 1987
A; Title: Alterations in the phenotype of plant cells studied by NH2-terminal
amino acid-sequence analysis of proteins electroblotted from two-dimensional
gel-separated total extracts.
A; Reference number: A94167
A; Accession: D28027
A; Molecule type: protein
A; Residues: 1-10 <BAU>
  Query Match
                          41.7%; Score 20; DB 2; Length 10;
                          60.0%; Pred. No. 8.4e+02;
  Best Local Similarity
  Matches
            3; Conservative
                                2; Mismatches
                                                   0; Indels
                                                                 0; Gaps
```

```
3 SYVPL 7
Qy
              |:||:
Db
            5 SFVPI 9
RESULT 14
PN0042
stathmin - mouse (fragment)
C; Species: Mus musculus (house mouse)
C;Date: 29-Oct-1997 #sequence revision 29-Oct-1997 #text change 23-Jan-1998
C; Accession: PN0042
R; Kato, H.
Kawasaki Igakkaishi 22, 245-259, 1996
A; Title: Analysis of proteins isolated by two dimensional electrophoresis of
mouse neuroblastoma cells.
A; Reference number: PN0041
A; Accession: PN0042
A; Molecule type: protein
A; Residues: 1-11 <KAT>
A; Experimental source: neuroblastoma cell
C; Comment: The molecular mass is 17,500 and the pI is 5.63. The amino-terminus
is blocked.
C; Keywords: brain
                          41.7%; Score 20; DB 2; Length 11;
  Query Match
  Best Local Similarity
                          80.0%;
                                  Pred. No. 9.2e+02;
  Matches
             4; Conservative
                               0; Mismatches
                                                   1; Indels
                                                                  0; Gaps
                                                                               0;
Qу
            5 VPLFP 9
              11 11
Db
            3 VPDFP 7
RESULT 15
A61308
hemocyanin chain 2 - Sahara scorpion (fragment)
C; Species: Androctonus australis (Sahara scorpion)
C;Date: 17-Jul-1994 #sequence revision 17-Jul-1994 #text change 07-May-1999
C; Accession: A61308
R; Jolles, J.; Jolles, P.; Lamy, J.; Lamy, J.
FEBS Lett. 106, 289-291, 1979
A; Title: Structural characterization of seven different subunits in Androctonus
australis haemocyanin.
A; Reference number: A61308; MUID: 80047238; PMID: 499512
A; Accession: A61308
A; Status: preliminary
A; Molecule type: protein
A; Residues: 1-14 <JOL>
  Query Match
                          41.7%; Score 20; DB 2; Length 14;
  Best Local Similarity
                          75.0%; Pred. No. 1.2e+03;
 Matches
             3; Conservative 1; Mismatches
                                                   0; Indels
                                                                  0; Gaps
                                                                              0;
            5 VPLF 8
Qу
              : 111
Db
           10 IPLF 13
```

```
RESULT 16
B59137
protein Pf1 - golden needle mushroom (fragment)
C; Species: Flammulina velutipes (golden needle mushroom)
C; Date: 03-Dec-1999 #sequence revision 03-Dec-1999 #text change 03-Dec-1999
C; Accession: B59137
R; Sakamoto, Y.; Ando, A.; Tamai, Y.; Miura, K.
submitted to the Protein Sequence Database, November 1999
A; Description: Differences of proteins expressed in the fruiting dikaryon and
the non-fruiting monokaryon of Flammulina velutipes.
A; Reference number: A59137
A; Accession: B59137
A; Molecule type: protein
A; Residues: 1-15 <SAK>
A; Experimental source: strain FV-4
  Query Match
                          41.7%; Score 20; DB 2; Length 15;
  Best Local Similarity
                          75.0%; Pred. No. 1.3e+03;
                                1; Mismatches
                                                  0; Indels
                                                                  0; Gaps
            3; Conservative
            4 YVPL 7
Qу
              111:
Db
            8 YVPM 11
RESULT 17
A28027
protein P2 - curled-leaved tobacco (fragment)
C; Species: Nicotiana plumbaginifolia (curled-leaved tobacco)
C;Date: 19-May-1989 #sequence revision 19-May-1989 #text change 18-Jun-1993
C; Accession: A28027
R; Bauw, G.; De Loose, M.; Inze, D.; Van Montaqu, M.; Vandekerckhove, J.
Proc. Natl. Acad. Sci. U.S.A. 84, 4806-4810, 1987
A; Title: Alterations in the phenotype of plant cells studied by NH2-terminal
amino acid-sequence analysis of proteins electroblotted from two-dimensional
gel-separated total extracts.
A; Reference number: A94167
A; Accession: A28027
A; Molecule type: protein
A; Residues: 1-18 <BAU>
A; Note: 14-Arg was also found
  Query Match
                          41.7%; Score 20; DB 2; Length 18;
  Best Local Similarity
                          37.5%; Pred. No. 1.5e+03;
             3; Conservative
                                 3; Mismatches
                                                  2; Indels
                                                                  0; Gaps
            2 ESYVPLFP 9
Qу
              :: ||: |
            6 DTIVPIAP 13
Db
RESULT 18
neurofibromatosis-related protein NF1, long splice form - human (fragment)
C; Species: Homo sapiens (man)
```

```
C; Date: 23-Oct-1990 #sequence revision 23-Oct-1990 #text change 29-Aug-1997
C:Accession: B35910
R; Cawthon, R.M.; Weiss, R.; Xu, G.; Viskochil, D.; Culver, M.; Stevens, J.;
Robertson, M.; Dunn, D.; Gesteland, R.; O'Connell, P.; White, R.
Cell 62, 608b, 1990
A; Reference number: A35910
A; Accession: B35910
A; Status: preliminary; nucleic acid sequence not shown; not compared with
conceptual translation
A; Molecule type: mRNA
A; Residues: 1-18 < CAW>
C; Genetics:
A; Gene: GDB: NF1
A; Cross-references: GDB:120231; OMIM:162200
A; Map position: 17q11.2-17q11.2
C; Keywords: alternative splicing; tumor suppressor
                          41.7%; Score 20; DB 2; Length 18;
  Query Match
                          50.0%; Pred. No. 1.5e+03;
  Best Local Similarity
                                                                  0; Gaps
                                                                              0;
            3; Conservative
                                 2; Mismatches
                                                   1; Indels
  Matches
            4 YVPLFP 9
QУ
              :: |||
Db
           11 FMQLFP 16
RESULT 19
501119
photosystem II protein psbK - spinach chloroplast (fragment)
C; Species: chloroplast Spinacia oleracea (spinach)
C; Date: 30-Jun-1989 #sequence revision 31-Dec-1990 #text change 19-Jan-1996
C; Accession: S01119
R; Murata, N.; Miyao, M.; Hayashida, N.; Hidaka, T.; Sugiura, M.
FEBS Lett. 235, 283-288, 1988
A; Title: Identification of a new gene in the chloroplast genome encoding a low-
molecular-mass polypeptide of photosystem II complex.
A; Reference number: S01119
A; Accession: S01119
A; Molecule type: protein
A; Residues: 1-13 <MUR>
C; Genetics:
A; Gene: psbK
A; Genome: chloroplast
C; Superfamily: photosystem II protein psbK
C; Keywords: chloroplast; membrane-associated complex; photosynthesis;
photosystem II; thylakoid
  Query Match
                          39.6%; Score 19; DB 2; Length 13;
                          50.0%; Pred. No. 1.7e+03;
  Best Local Similarity
                                                                              0;
             4; Conservative
                                 1; Mismatches
                                                                  0; Gaps
  Matches
                                                  3; Indels
            2 ESYVPLFP 9
Qу
              1:1
Db
            4 EAYAFLXP 11
```

```
S21152
tryptophyllin-related peptide - two-colored leaf frog
C; Species: Phyllomedusa bicolor (two-colored leaf frog)
C;Date: 19-Mar-1997 #sequence revision 19-Mar-1997 #text change 18-Aug-2000
C; Accession: S21152
R; Mignogna, G.; Severini, C.; Simmaco, M.; Negri, L.; Falconieri Erspamer, G.;
Kreil, G.; Barra, D.
FEBS Lett. 302, 151-154, 1992
A; Title: Identification and characterization of two dermorphins from skin
extracts of the Amazonian frog Phyllomedusa bicolor.
A; Reference number: S21152; MUID: 92339502; PMID: 1633846
A; Accession: S21152
A; Molecule type: protein
A; Residues: 1-13 <MIG>
A; Experimental source: skin
C; Superfamily: unassigned animal peptides
                          39.6%; Score 19; DB 2; Length 13;
  Query Match
                          50.0%; Pred. No. 1.7e+03;
  Best Local Similarity
                                                                              0;
                                                                  0; Gaps
           2; Conservative
                                 2; Mismatches
                                                 0; Indels
            6 PLFP 9
Qу
              1::1
            9 PIYP 12
Db
RESULT 21
A05174
tryptophyllin-13 - Rohde's leaf frog
C; Species: Phyllomedusa rohdei (Rohde's leaf frog)
C;Date: 05-Jun-1987 #sequence revision 05-Jun-1987 #text change 18-Aug-2000
C; Accession: A05174
R; Montecucchi, P.C.; Gozzini, L.; Erspamer, V.
Int. J. Pept. Protein Res. 27, 175-182, 1986
A; Reference number: A05174
A; Accession: A05174
A; Molecule type: protein
A; Residues: 1-13 <MON>
C; Superfamily: unassigned animal peptides
C; Keywords: pyroglutamic acid; skin
F;1/Modified site: pyrrolidone carboxylic acid (Gln) #status experimental
                          39.6%; Score 19; DB 2; Length 13;
  Query Match
                          50.0%; Pred. No. 1.7e+03;
  Best Local Similarity
                                                                              0;
  Matches
            2; Conservative
                                 2; Mismatches 0; Indels
                                                                  0; Gaps
            6 PLFP 9
Qу
              |::|
            9 PIYP 12
Db
RESULT 22
S22236
lipoxygenase (EC 1.13.11.12) 1 - barley (fragment)
C; Species: Hordeum vulgare (barley)
C;Date: 19-Mar-1997 #sequence revision 24-Mar-1999 #text change 24-Mar-1999
C; Accession: S22236
```

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R; Doderer, A.; Kokkelink, I.; van der Veen, S.; Valk, B.E.; Schram, A.W.; Douma,
Biochim. Biophys. Acta 1120, 97-104, 1992
A; Title: Purification and characterization of two lipoxygenase isoenzymes from
germinating barley.
A; Reference number: S21772; MUID: 92207997; PMID: 1554746
A; Accession: S22236
A; Molecule type: protein
A; Residues: 1-14 < DOD>
A; Experimental source: var. Triumph, seed
C; Function:
A; Description: catalyzes the peroxidation of polyunsaturates fatty acids to
their corresponding hydroperoxides
C; Superfamily: lipoxygenase
C; Keywords: monomer; oxidoreductase; seed
  Query Match
                          39.6%; Score 19; DB 2; Length 14;
  Best Local Similarity
                          50.0%; Pred. No. 1.9e+03;
  Matches
             3; Conservative
                                 2; Mismatches
                                                   1; Indels
                                                                  0; Gaps
                                                                               0;
Qу
            4 YVPLFP 9
              1: 1:1
Db
            3 YMLLYP 8
RESULT 23
S77988
cytochrome-c oxidase (EC 1.9.3.1) chain VIIa - bigeye tuna (fragment)
C; Species: Thunnus obesus (bigeye tuna)
C;Date: 17-Sep-1997 #sequence revision 17-Sep-1997 #text change 04-Sep-1998
C; Accession: S77988
R; Arnold, S.; Lee, J.; Kim, M.; Song, E.; Linder, D.; Lottspeich, F.; Kadenbach,
В.
submitted to the Protein Sequence Database, June 1997
A; Reference number: S77980
A; Accession: S77988
A; Molecule type: protein
A; Residues: 1-15 <ARN>
A; Experimental source: heart; liver
C: Genetics:
A; Genome: nuclear
C; Function:
A; Pathway: oxidative phosphorylation; respiratory chain
C; Keywords: electron transfer; membrane-associated complex; mitochondrial inner
membrane; mitochondrion; oxidative phosphorylation; oxidoreductase; respiratory
chain
  Query Match
                          39.6%; Score 19; DB 2; Length 15;
  Best Local Similarity
                          75.0%; Pred. No. 2e+03;
  Matches
             3; Conservative
                                 1; Mismatches
                                                    0; Indels
                                                                  0; Gaps
                                                                               0;
            3 SYVP 6
Qу
              :111
Db
            2 NYVP 5
```

```
B36300
T-cell receptor delta chain V-J region - mouse (fragment)
C; Species: Mus musculus (house mouse)
C;Date: 28-Mar-1991 #sequence revision 28-Mar-1991 #text change 30-May-1997
C; Accession: B36300
R; Matis, L.A.; Fry, A.M.; Cron, R.Q.; Cotterman, M.M.; Dick, R.F.; Bluestone,
J.A.
Science 245, 746-749, 1989
A; Title: Structure and specificity of a class II MHC alloreactive gammadelta T
cell receptor heterodimer.
A; Reference number: A36300; MUID: 89368895; PMID: 2528206
A; Accession: B36300
A; Status: preliminary; not compared with conceptual translation
A; Molecule type: mRNA
A; Residues: 1-16 <MAT>
C; Keywords: T-cell receptor
                          39.6%; Score 19; DB 2; Length 16;
  Query Match
  Best Local Similarity
                          50.0%; Pred. No. 2.1e+03;
 Matches
            2; Conservative 2; Mismatches 0; Indels
            4 YVPL 7
Qy
              1:1:
Db
            4 YIPI 7
RESULT 25
S59481
hydroxyproline-rich cell wall glycoprotein, 230K - kidney bean (fragment)
C; Species: Phaseolus vulgaris (kidney bean)
C; Date: 27-Apr-1996 #sequence revision 19-Jul-1996 #text change 05-Dec-1998
C; Accession: S59481
R; Wojtaszek, P.; Trethowan, J.; Bolwell, G.P.
Plant Mol. Biol. 28, 1075-1087, 1995
A; Title: Specificity in the immobilisation of cell wall proteins in response to
different elicitor molecules in suspension-cultured cells of French bean
(Phaseolus vulgaris L.).
A; Reference number: S59481; MUID: 96011753; PMID: 7548825
A; Accession: S59481
A; Molecule type: protein
A; Residues: 1-17 <WOJ>
C; Keywords: glycoprotein; hydroxyproline
F;6,8,9,10,11/Modified site: hydroxyproline (Pro) #status experimental
                          39.6%; Score 19; DB 2; Length 17;
  Query Match
                          37.5%; Pred. No. 2.3e+03;
  Best Local Similarity
                                2; Mismatches
                                                  3; Indels
                                                                              0;
            3; Conservative
                                                                 0; Gaps
  Matches
            2 ESYVPLFP 9
QУ
              : |:| |
            1 DMYLPPVP 8
Db
RESULT 26
S09731
photosystem I protein psaI - spinach chloroplast (fragment)
C; Species: chloroplast Spinacia oleracea (spinach)
```

```
C; Date: 12-Feb-1993 #sequence revision 12-Feb-1993 #text change 19-Jan-1996
C; Accession: S09731
R; Ikeuchi, M.; Hirano, A.; Hiyama, T.; Inoue, Y.
FEBS Lett. 263, 274-278, 1990
A; Title: Polypeptide composition of higher plant photosystem I complex.
Identification of psaI, psaJ and psaK gene products.
A; Reference number: S09730; MUID: 90242987; PMID: 2185953
A; Accession: S09731
A; Molecule type: protein
A; Residues: 1-18 <IKE>
C; Genetics:
A; Gene: psaI
A; Genome: chloroplast
C; Superfamily: photosystem I protein psaI
C; Keywords: chloroplast; membrane-associated complex; photosynthesis;
photosystem I; thylakoid
                          39.6%; Score 19; DB 2; Length 18;
  Query Match
                          50.0%; Pred. No. 2.4e+03;
  Best Local Similarity
                                                 0; Indels
                                                                  4; Gaps
                                                                              1;
            5; Conservative
                                 1; Mismatches
            4 YVPL----FP 9
Qу
              : | | |
                      -11
            7 FVPLVGLVFP 16
Db
RESULT 27
PL0152
metal-binding protein - reticulate nassa (fragment)
C; Species: Nassarius reticulatus (reticulate nassa)
C;Date: 31-Dec-1990 #sequence revision 31-Dec-1990 #text change 20-Jun-2000
C; Accession: PL0152
R; Andersen, R.A.; Eriksen, K.D.H.; Bakke, T.
Comp. Biochem. Physiol. B 94, 285-291, 1989
A; Title: Evidence of presence of a low molecular weight, non-metallothionein-
like metal-binding protein in the marine gastropod Nassarius reticulatus L.
A; Reference number: PL0152
A; Accession: PL0152
A; Molecule type: protein
A; Residues: 1-14 <AND>
C; Comment: This protein is induced in environments contaminated with heavy
metal.
  Query Match
                          38.5%; Score 18.5; DB 2;
                                                       Length 14;
  Best Local Similarity
                          71.4%; Pred. No. 2.3e+03;
             5; Conservative
                                 0; Mismatches
                                                   1; Indels
                                                                  1; Gaps
            2 ESYVPLF 8
Qу
              1 | | | |
Db
            8 EXY-PLF 13
RESULT 28
A60356
118K stomach cancer antigen - human (fragment)
C; Species: Homo sapiens (man)
C;Date: 12-Feb-1993 #sequence revision 12-Feb-1993 #text change 17-Mar-1999
```

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C; Accession: A60356
R; Shiraishi, Y.
Int. J. Cancer 45, 783-787, 1990
A; Title: Western blotting analysis for malignant lymphoma and stomach cancer
antigens from carcinogen-transformed bloom syndrome cells.
A; Reference number: A60356; MUID: 90216080; PMID: 2323853
A; Accession: A60356
A; Molecule type: protein
A; Residues: 1-9 <SHI>
C; Keywords: glycoprotein
  Query Match
                          37.5%; Score 18; DB 2; Length 9;
                          60.0%; Pred. No. 2.8e+05;
 Best Local Similarity
             3: Conservative
                                 1; Mismatches
                                                 1; Indels
                                                                  0; Gaps
                                                                              0;
            5 VPLFP 9
Qу
              :11 1
            1 IPLKP 5
RESULT 29
S78026
ribosomal protein YmL29, mitochondrial - yeast (Saccharomyces cerevisiae)
(fragment)
C; Species: Saccharomyces cerevisiae
C;Date: 09-Oct-1997 #sequence revision 24-Oct-1997 #text change 14-Nov-1997
C; Accession: S78026
R; Kitakawa, M.; Graack, H.R.; Grohmann, L.; Goldschmidt-Reisin, S.; Herfurth,
E.; Wittmann-Liebold, B.; Nishimura, T.; Isono, K.
Eur. J. Biochem. 245, 449-456, 1997
A; Title: Identification and characterization of the genes for mitochondrial
ribosomal proteins of Saccharomyces cerevisiae.
A; Reference number: S78018; MUID: 97296414; PMID: 9151978
A; Accession: S78026
A; Molecule type: protein
A; Residues: 1-11 <KIT>
C; Genetics:
A; Genome: nuclear
C; Keywords: mitochondrion; protein biosynthesis; ribosome
                          37.5%; Score 18; DB 2; Length 11;
  Query Match
                          50.0%; Pred. No. 2.3e+03;
  Best Local Similarity
  Matches
            4; Conservative
                                 2; Mismatches 0; Indels
                                                                  2;
                                                                              1;
            2 ESYVPLFP 9
Qу
              1:1: 11
            3 EAYI--FP 8
RESULT 30
S01122
photosystem II 3.7K protein - spinach (fragment)
C; Species: Spinacia oleracea (spinach)
C; Date: 01-Dec-1989 #sequence revision 01-Dec-1989 #text change 18-Jun-1993
C; Accession: S01122
R; Schroeder, W.P.; Henrysson, T.; Akerlund, H.E.
FEBS Lett. 235, 289-292, 1988
```

```
A; Title: Characterization of low molecular mass proteins of photosystem II by N-
terminal sequencing.
A; Reference number: S01120
A; Accession: S01122
A; Molecule type: protein
A; Residues: 1-12 <SCH>
C; Keywords: chloroplast; photosynthesis; photosystem II; thylakoid
                          37.5%; Score 18; DB 2; Length 12;
  Query Match
  Best Local Similarity 50.0%; Pred. No. 2.5e+03;
                                                                              0;
 Matches
            4; Conservative 1; Mismatches 3; Indels
                                                                  0; Gaps
            2 ESYVPLFP 9
Qу
              1:1 1 1
Db
            4 EAYAFLSP 11
RESULT 31
S74196
3-hydroxy-3-methylglutaryl CoA synthase homolog - bovine (fragment)
C; Species: Bos primigenius taurus (cattle)
C;Date: 14-Apr-1998 #sequence_revision 24-Apr-1998 #text_change 01-May-1998
C; Accession: S74196
R; Taketani, S.; Yoshinaga, T.; Furukawa, T.; Kohno, H.; Tokunaga, R.; Nishimura,
K.; Inokuchi, H.
Eur. J. Biochem. 230, 760-765, 1995
A; Title: Induction of terminal enzymes for heme biosynthesis during
differentiation of mouse erythroleukemia cells.
A; Reference number: S65629; MUID: 95331315; PMID: 7607249
A; Accession: S74196
A; Molecule type: protein
A; Residues: 1-12 <TAK>
A; Experimental source: liver
                          37.5%; Score 18; DB 2; Length 12;
  Query Match
                          57.1%; Pred. No. 2.5e+03;
  Best Local Similarity
                                 0; Mismatches 3; Indels
                                                                  0; Gaps
                                                                              0;
  Matches
            4; Conservative
            3 SYVPLFP 9
Qу
              1 11 1
            1 STVPAVP 7
Db
RESULT 32
A59387
VCAM-1 5'UTR binding protein - Rana pipiens (fragment)
C; Species: Rana pipiens
C;Date: 24-May-2001 #sequence revision 24-May-2001 #text change 24-May-2001
C; Accession: A59387
R; BANERJEE, H.
submitted to the Protein Sequence Database, February 2001
A; Description: Identification and characterization of a novel VCAM-1 5'UTR.
A; Reference number: A59387
A; Accession: A59387
A; Status: preliminary
A; Molecule type: protein
```

A; Residues: 1-13 <BAN>

```
A; Experimental source: CCL-145
A; Note: VCAM-1 5' untranslated region binding protein with a probable
translation inhibitory effect
  Query Match
                          37.5%;
                                  Score 18; DB 2; Length 13;
  Best Local Similarity
                          60.0%; Pred. No. 2.7e+03;
 Matches
             3; Conservative
                                 1; Mismatches
                                                   1; Indels
                                                                  0; Gaps
                                                                              0;
            5 VPLFP 9
Qу
              : | | |
            1 IPLDP 5
Db
RESULT 33
PH0805
T-cell receptor alpha chain (PE5.1.1V-alpha-2.8I) - mouse (fragment)
C; Species: Mus musculus (house mouse)
C;Date: 17-Jul-1992 #sequence revision 17-Jul-1992 #text change 30-May-1997
C; Accession: PH0805
R; Casanova, J.L.; Romero, P.; Widmann, C.; Kourilsky, P.; Maryanski, J.L.
J. Exp. Med. 174, 1371-1383, 1991
A; Title: T cell receptor genes in a series of class I major histocompatibility
complex-restricted cytotoxic T lymphocyte clones specific for a Plasmodium
berghei nonapeptide: implications for T cell allelic exclusion and antigen-
specific repertoire.
A; Reference number: PH0746; MUID: 92078846; PMID: 1836010
A; Accession: PH0805
A; Molecule type: mRNA
A; Residues: 1-13 <CAS>
A; Cross-references: EMBL: X60914
A; Experimental source: T lymphocyte
C; Keywords: T-cell receptor
  Query Match
                          37.5%; Score 18; DB 2; Length 13;
                          50.0%; Pred. No. 2.7e+03;
  Best Local Similarity
                                1; Mismatches
                                                   2; Indels
                                                                              0;
 Matches
            3; Conservative
                                                                  0; Gaps
            3 SYVPLF 8
Qу
              : 1 1 1
Db
            7 NYKPTF 12
RESULT 34
T77387
AMP deaminase - rat (fragment)
C; Species: Rattus norvegicus (Norway rat)
C;Date: 02-Aug-1996 #sequence_revision 02-Aug-1996 #text change 05-Nov-1999
C; Accession: I77387
R; Mineo, I.; Clarke, P.R.H.; Sabina, R.L.; Holmes, E.W.
Mol. Cell. Biol. 10, 5271-5278, 1990
A; Title: A novel pathway for alternative splicing: Identification of an RNA
intermediate that generates an alternative 5' splice donor site not present in
the primary transcript of AMPD1.
A; Reference number: I57509; MUID: 90377216; PMID: 2398891
A; Accession: 177387
A; Status: preliminary; translated from GB/EMBL/DDBJ
A; Molecule type: mRNA
```

```
A; Residues: 1-13 < RES>
A;Cross-references: GB:M58689; NID:g202877; PIDN:AAA40727.1; PID:g554414
C; Genetics:
A; Gene: AMPD1
A; Introns: 8/1
                          37.5%; Score 18; DB 2; Length 13;
  Query Match
  Best Local Similarity 75.0%; Pred. No. 2.7e+03;
             3; Conservative 1; Mismatches 0; Indels
                                                                              0;
 Matches
                                                                 0; Gaps
            5 VPLF 8
Qy
              :111
Db
            1 MPLF 4
RESULT 35
PC4391
cysteine proteinase (EC 3.4.22.-) B - Freesia reflacta ssp. 'Golden leader'
C; Species: Freesia reflacta ssp. 'Golden leader'
C;Date: 10-Nov-1997 #sequence revision 10-Nov-1997 #text change 07-May-1999
C; Accession: PC4391
R; Kaneda, M.; Yonezawa, H.; Uchikoba, T.
Biosci. Biotechnol. Biochem. 61, 1554-1559, 1997
A; Title: Purification and characterization of a cysteine protease from corms of
freesia, Freesia reflacta.
A; Reference number: PC4391; MUID: 97480942; PMID: 9339558
A; Accession: PC4391
A; Molecule type: protein
A; Residues: 1-13 <KAN>
A; Experimental source: corms
C; Comment: This enzyme plays many proteolytic functions in intracellular and
extracellular processes such as degradation of storage proteins in germinating
C; Keywords: cysteine proteinase; hydrolase
 Query Match
                          37.5%; Score 18; DB 2; Length 13;
                          60.0%; Pred. No. 2.7e+03;
  Best Local Similarity
 Matches
            3; Conservative
                               0; Mismatches 2; Indels
                                                                  0; Gaps
                                                                              0;
            4 YVPLF 8
Qу
              \perp
Db
            1 YPPFF 5
RESULT 36
PH1566
cerebrin 30 - human (fragment)
C; Species: Homo sapiens (man)
C;Date: 05-Aug-1994 #sequence revision 05-Aug-1994 #text change 07-May-1999
C; Accession: PH1566
R; Leone, M.G.; Saso, L.; Vecchio, A.D.; Mo, M.; Silvestrini, B.; Cheng, C.Y.
J. Neurochem. 61, 533-540, 1993
A; Title: Micropurification of two human cerebrospinal fluid proteins by high
performance electrophoresis chromatography.
A; Reference number: PH1566; MUID: 93329419; PMID: 8336140
A; Accession: PH1566
```

```
A; Residues: 1-14 <LEO>
  Query Match
                          37.5%; Score 18; DB 2; Length 14;
  Best Local Similarity
                          66.7%; Pred. No. 2.9e+03;
  Matches
            4; Conservative
                                0; Mismatches
                                                   2; Indels
                                                                 0; Gaps
                                                                              0;
            3 SYVPLF 8
Qу
              | |||
            7 SVQPLF 12
Db
RESULT 37
PN0666
dystrophin-associated glycoprotein A3a-V - rabbit (fragment)
C; Species: Oryctolagus cuniculus (domestic rabbit)
C; Date: 19-May-1994 #sequence revision 19-May-1994 #text change 07-May-1999
C; Accession: PN0666
R; Yoshida, M.; Mizuno, Y.; Nonaka, I.; Ozawa, E.
J. Biochem. 114, 634-639, 1993
A; Title: A dystrophin-associated glycoprotein, A3a (one of 43DAG doublets), is
retained in Duchenne muscular dystrophy muscle.
A; Reference number: PN0662; MUID: 94156881; PMID: 8113213
A; Accession: PN0666
A; Molecule type: protein
A; Residues: 1-14 <YOS>
C; Comment: This protein is retained in Duchenne type muscular dystrophy muscle.
C; Keywords: glycoprotein; skeletal muscle
  Query Match
                          37.5%;
                                 Score 18; DB 2; Length 14;
  Best Local Similarity
                          75.0%; Pred. No. 2.9e+03;
 Matches
            3; Conservative
                                0; Mismatches
                                                      Indels
                                                                 0; Gaps
                                                                              0;
                                                  1;
            4 YVPL 7
Qу
              1 11
Db
            1 YTPL 4
RESULT 38
C59137
protein Pf3 - golden needle mushroom (fragment)
C; Species: Flammulina velutipes (golden needle mushroom)
C;Date: 03-Dec-1999 #sequence revision 03-Dec-1999 #text change 03-Dec-1999
C; Accession: C59137
R; Sakamoto, Y.; Ando, A.; Tamai, Y.; Miura, K.
submitted to the Protein Sequence Database, November 1999
A; Description: Differences of proteins expressed in the fruiting dikaryon and
the non-fruiting monokaryon of Flammulina velutipes.
A; Reference number: A59137
A; Accession: C59137
A; Molecule type: protein
A; Residues: 1-14 <SAK>
  Query Match
                          37.5%; Score 18; DB 2; Length 14;
                         100.0%; Pred. No. 2.9e+03;
  Best Local Similarity
            3; Conservative 0; Mismatches 0; Indels
```

A; Molecule type: protein

```
4 YVP 6
Qу
              \perp
            8 YVP 10
Db
RESULT 39
LFECF
phe operon leader peptide - Escherichia coli (strain K-12)
N; Alternate names: attenuator peptide
C; Species: Escherichia coli
C; Date: 18-Aug-1982 #sequence revision 18-Aug-1982 #text change 01-Mar-2002
C; Accession: A03593; B36494; A65038
R; Zurawski, G.; Brown, K.; Killingly, D.; Yanofsky, C.
Proc. Natl. Acad. Sci. U.S.A. 75, 4271-4275, 1978
A; Title: Nucleotide sequence of the leader region of the phenylalanine operon of
Escherichia coli.
A; Reference number: A03593; MUID: 79033820; PMID: 360214
A; Accession: A03593
A; Molecule type: DNA
A; Residues: 1-15 <ZUR>
A; Cross-references: GB: V00314; GB: J01658; NID: q42378; PIDN: CAA23600.1;
PID:q42379
R; Gavini, N.; Davidson, B.E.
J. Biol. Chem. 265, 21532-21535, 1990
A; Title: pheAo mutants of Escherichia coli have a defective pheA attenuator.
A; Reference number: A36494; MUID: 91072346; PMID: 2254312
A; Accession: B36494
A; Molecule type: DNA
A; Residues: 1-15 <GAV>
A; Cross-references: GB: M58024; GB: J05694; NID: q147178; PIDN: AAA62783.1;
PID: g147180
R; Blattner, F.R.; Plunkett III, G.; Bloch, C.A.; Perna, N.T.; Burland, V.;
Riley, M.; Collado-Vides, J.; Glasner, J.D.; Rode, C.K.; Mayhew, G.F.; Gregor,
J.; Davis, N.W.; Kirkpatrick, H.A.; Goeden, M.A.; Rose, D.J.; Mau, B.; Shao, Y.
Science 277, 1453-1462, 1997
A; Title: The complete genome sequence of Escherichia coli K-12.
A; Reference number: A64720; MUID: 97426617; PMID: 9278503
A; Accession: A65038
A; Status: preliminary; nucleic acid sequence not shown; translation not shown
A; Molecule type: DNA
A; Residues: 1-15 < BLAT>
A; Cross-references: GB: AE000346; GB: U00096; NID: q2367141; PIDN: AAC75647.1;
PID:q1788950; UWGP:b2598
A; Experimental source: strain K-12, substrain MG1655
C; Genetics:
A; Gene: pheL; pheAe
A; Map position: 56 min
C; Superfamily: pheA leader peptide
  Query Match
                           37.5%; Score 18; DB 1; Length 15;
  Best Local Similarity
                           40.0%; Pred. No. 3.1e+03;
                                 2; Mismatches
                                                                                0;
  Matches
            2; Conservative
                                                    1; Indels
                                                                   0; Gaps
            4 YVPLF 8
Qу
              ::| |
```

3 HIPFF 7

Db

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RESULT 40
PW0004
chlorophyll a/b-binding protein 24.5K - green alga (Dunaliella tertiolecta)
(fragment)
N; Alternate names: photosystem II light-harvesting chlorophyll 24.5K protein
C; Species: Dunaliella tertiolecta
C; Date: 04-Sep-1998 #sequence revision 24-Nov-1999 #text change 24-Nov-1999
C; Accession: PW0004
R; LaRoche, J.; Bennett, J.; Falkowski, P.G.
Gene 95, 165-171, 1990
A; Title: Characterization of a cDNA encoding for the 28.5-kDa LHCII apoprotein
from the unicellular marine chlorophyte, Dunaliella tertiolecta.
A; Reference number: JW0040; MUID: 91065528; PMID: 2249775
A; Accession: PW0004
A; Molecule type: protein
A; Residues: 1-15 <LAR>
C; Superfamily: chlorophyll a/b-binding protein
C; Keywords: chloroplast; grana; light-harvesting complex; membrane adhesion;
membrane protein; photosynthesis; photosystem II; thylakoid
                          37.5%; Score 18; DB 2; Length 15;
  Query Match
                          66.7%; Pred. No. 3.1e+03;
  Best Local Similarity
                                 0; Mismatches
                                                                      Gaps
                                                                              0;
  Matches
             4; Conservative
                                                 2; Indels
            1 VESYVP 6
QУ
              1 VEFYGP 6
Db
RESULT 41
PN0665
dystrophin-associated glycoprotein A3a-IV - rabbit (fragment)
C; Species: Oryctolagus cuniculus (domestic rabbit)
C; Date: 19-May-1994 #sequence revision 19-May-1994 #text change 07-May-1999
C; Accession: PN0665
R; Yoshida, M.; Mizuno, Y.; Nonaka, I.; Ozawa, E.
J. Biochem. 114, 634-639, 1993
A; Title: A dystrophin-associated glycoprotein, A3a (one of 43DAG doublets), is
retained in Duchenne muscular dystrophy muscle.
A; Reference number: PN0662; MUID: 94156881; PMID: 8113213
A; Accession: PN0665
A; Molecule type: protein
A; Residues: 1-15 <YOS>
C; Comment: This protein is retained in Duchenne type muscular dystrophy muscle.
C; Keywords: glycoprotein; skeletal muscle
                          37.5%;
                                  Score 18; DB 2; Length 15;
  Query Match
  Best Local Similarity
                          75.0%; Pred. No. 3.1e+03;
  Matches
             3; Conservative
                                 0; Mismatches
                                                   1; Indels
                                                                  0; Gaps
            4 YVPL 7
Qу
              1 11
            1 YTPL 4
Db
```

```
T09741
photosystem I chain psaI - upland cotton chloroplast (fragment)
C; Species: chloroplast Gossypium hirsutum (upland cotton)
C;Date: 20-Sep-1999 #sequence revision 20-Sep-1999 #text change 20-Sep-1999
C; Accession: T09741
R; Small, R.L.; Ryburn, J.A.; Cronn, R.C.; Seelanan, T.; Wendel, J.F.
Am. J. Bot. 85, 1301-1315, 1998
A:Title: The tortoise and the hare: choosing between noncoding plastome and
nuclear Adh sequences for phylogeny reconstruction in a recently diverged plant
group.
A; Reference number: Z16323
A; Accession: T09741
A; Status: translated from GB/EMBL/DDBJ
A; Molecule type: DNA
A; Residues: 1-16 < SMA>
A; Cross-references: EMBL: AF031581; NID: g2623684; PID: g3723945
C; Genetics:
A; Gene: psaI
A; Genome: chloroplast
C; Keywords: chloroplast; photosynthesis; photosystem I
                          37.5%; Score 18; DB 2; Length 16;
  Query Match
                          75.0%; Pred. No. 3.4e+03;
  Best Local Similarity
             3; Conservative
                                 1; Mismatches
                                                  0; Indels
                                                                      Gaps
            4 YVPL 7
Qу
              : | | |
Db
           11 FVPL 14
RESULT 43
S38292
30K allergen - rye (fragment)
C; Species: Secale cereale (rye)
C;Date: 19-May-1994 #sequence_revision 27-Feb-1997 #text change 07-May-1999
C; Accession: S38292
R; Petersen, A.; Schramm, G.; Becker, W.M.; Schlaak, M.
Biol. Chem. Hoppe-Seyler 374, 855-861, 1993
A; Title: Comparison of four grass pollen species concerning their allergens of
grass group V by 2D immunoblotting and microsequencing.
A; Reference number: S38288; MUID: 94092339; PMID: 7505588
A:Accession: S38292
A; Molecule type: protein
A; Residues: 1-16 < PET>
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RESULT 44 S17274

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ribosomal protein YmL35, mitochondrial, questionable - yeast (Saccharomyces
cerevisiae) (fragment)
C; Species: Saccharomyces cerevisiae
A; Variety: strain 07173
C; Date: 23-Apr-1993 #sequence revision 14-Sep-1994 #text change 09-May-1997
C; Accession: S17274
R; Grohmann, L.; Graack, H.R.; Kruft, V.; Choli, T.; Goldschmidt-Reisin, S.;
Kitakawa, M.
FEBS Lett. 284, 51-56, 1991
A; Title: Extended N-terminal sequencing of proteins of the large ribosomal
subunit from yeast mitochondria.
A; Reference number: S17255; MUID: 91285106; PMID: 2060626
A; Accession: S17274
A; Molecule type: protein
A; Residues: 1-17 <GRO>
C; Comment: A coding region for this protein could not be identified in the
genome of Saccharomyces cerevisiae S288C.
C; Genetics:
A; Genome: nuclear
C; Keywords: mitochondrion; protein biosynthesis; ribosome
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C; Species: Homo sapiens (man)
C;Date: 01-Nov-1996 #sequence revision 01-Nov-1996 #text change 21-Jul-2000
C; Accession: I52614
R; Soravia, E.; Grebe, A.; De Luca, P.; Helin, K.; Suh, T.T.; Degen, J.L.; Blasi,
Blood 86, 624-635, 1995
A; Title: A conserved TATA-less proximal promoter drives basal transcription from
the urokinase-type plasminogen activator receptor gene.
A; Reference number: I52614; MUID: 95329719; PMID: 7605992
A; Accession: I52614
A; Status: preliminary; translated from GB/EMBL/DDBJ
A; Molecule type: DNA
A; Residues: 1-18 < RES>
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N; Contains: fibrinopeptide B
C; Species: Anas platyrhynchos (domestic duck)
C;Date: 30-Jun-1987 #sequence revision 28-Dec-1987 #text change 13-Sep-1996
C; Accession: JP0102
R; Min, Y.; Ping, Z.; Yaoshi, Z.
Sci. Sin. B Chem. Biol. Agric. Med. Earth Sci. 28, 31-35, 1985
A; Title: Purification and primary structures of duck fibrinopeptides A and B.
A; Reference number: A94238
A; Accession: JP0102
A; Molecule type: protein
A; Residues: 1-18 <MIN>
C; Superfamily: fibrinogen beta chain; fibrinogen beta/gamma homology; fibrinogen
disulfide ring homology
C; Keywords: blood coagulation; plasma; pyroglutamic acid; sulfoprotein
F;1/Modified site: pyrrolidone carboxylic acid (Gln) #status experimental
F;6/Binding site: sulfate (Tyr) (covalent) #status predicted
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gene Gax protein - mouse (fragment)
C; Species: Mus sp. (mouse)
C;Date: 02-Jul-1996 #sequence revision 02-Jul-1996 #text change 15-Oct-1999
C; Accession: A57458
R; Andres, V.; Fisher, S.; Wearsch, P.; Walsh, K.
Mol. Cell. Biol. 15, 4272-4281, 1995
A; Title: Regulation of Gax homeobox gene transcription by a combination of
positive factors including myocyte-specific enhancer factor 2.
A; Reference number: A57458; MUID: 95349593; PMID: 7623821
A; Accession: A57458
A; Status: preliminary; translated from GB/EMBL/DDBJ
A; Molecule type: DNA
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C; Species: Porphyromonas gingivalis
C;Date: 29-Sep-1999 #sequence_revision 29-Sep-1999 #text change 29-Sep-1999
C; Accession: A58838
R; Deshpande, R.
submitted to the Protein Sequence Database, April 1998
A; Reference number: A58838
A; Accession: A58838
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C;Date: 16-Jul-1999 #sequence revision 16-Jul-1999 #text change 16-Jul-1999
C; Accession: JU0356
R; Kinoshita, K.; Tanaka, J.; Kuroda, K.; Koyama, K.; Natori, S.; Kinoshita, T.
Chem. Pharm. Bull. 39, 712-715, 1991
A; Title: Cycloleonurinin, a cyclic peptide from Leonuri fructus.
A; Reference number: JU0356; MUID: 91300597; PMID: 2070452
A; Accession: JU0356
A; Status: preliminary
A; Molecule type: protein
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C; Species: Bos primigenius taurus (cattle)
C;Date: 20-Sep-1999 #sequence revision 20-Sep-1999 #text_change 20-Sep-1999
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C; Accession: S78766

R; Graack, H.R.

submitted to the Protein Sequence Database, July 1999

A; Reference number: S78760

A; Accession: S78766
A; Molecule type: protein
A; Residues: 1-13 < GRA>
C; Keywords: mitochondrion

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Db 6 VESFASM 12

Search completed: July 4, 2004, 04:47:20

Job time : 7.91791 secs

# GenCore version 5.1.6 Copyright (c) 1993 - 2004 Compugen Ltd.

OM protein - protein search, using sw model

July 4, 2004, 04:45:52; Search time 17.6642 Seconds Run on:

(without alignments)

158.601 Million cell updates/sec

US-09-641-802-31 Title:

Perfect score: 48

Sequence: 1 VESYVPLFP 9

Scoring table: BLOSUM62

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Minimum DB seq length: 7 Maximum DB seq length: 18

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 100 summaries

Published Applications AA:\* Database:

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

### SUMMARIES

ક્ર

Result Query

> Score Match Length DB No.

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| 3  | 33 | 68.8  | 15 | 12 | US-10-293-418-2310 | Sequence 2310, Ap |
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## ALIGNMENTS

## RESULT 1

US-10-281-652-31

- ; Sequence 31, Application US/10281652
- ; Publication No. US20030091606A1
- ; GENERAL INFORMATION:
- ; APPLICANT: STANTON, G. John ; APPLICANT: HUGHES, Thomas K.
- ; APPLICANT: BOLDOGH, Istvan

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; TITLE OF INVENTION: USE OF COLOSTRININ, CONSTITUENT PEPTIDES THEREOF, AND
; TITLE OF INVENTION: ANALOGS THEREOF AS OXIDATIVE STRESS REGULATORS
  FILE REFERENCE: 265.00220101
; CURRENT APPLICATION NUMBER: US/10/281,652
; CURRENT FILING DATE: 2002-10-28
  PRIOR APPLICATION NUMBER: US/09/641,803
  PRIOR FILING DATE: 2000-08-17
; PRIOR APPLICATION NUMBER: 60/149,310
  PRIOR FILING DATE: 1999-08-17
  NUMBER OF SEQ ID NOS: 34
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; SEQ ID NO 31
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  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
; FILE REFERENCE: PF523
; CURRENT APPLICATION NUMBER: US/09/880,748
; CURRENT FILING DATE: 2001-06-15
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  PRIOR FILING DATE: 2000-06-15
  PRIOR APPLICATION NUMBER: 60/240,816
  PRIOR FILING DATE: 2000-10-17
  PRIOR APPLICATION NUMBER: 60/276,248
  PRIOR FILING DATE: 2001-03-16
  PRIOR APPLICATION NUMBER: 60/277,379
  PRIOR FILING DATE: 2001-03-21
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; Publication No. US20030223996A1
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  APPLICANT: Ruben et al.
  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
 FILE REFERENCE: PF523P2
  CURRENT APPLICATION NUMBER: US/10/293,418
  CURRENT FILING DATE: 2002-11-27
 PRIOR APPLICATION NUMBER: 60/331,469
; PRIOR FILING DATE: 2001-11-16
; PRIOR APPLICATION NUMBER: 60/340,817
  PRIOR FILING DATE: 2001-12-19
  PRIOR APPLICATION NUMBER: 09/880,748
  PRIOR FILING DATE: 2001-06-15
  PRIOR APPLICATION NUMBER: 60/293,499
  PRIOR FILING DATE: 2001-05-25
  PRIOR APPLICATION NUMBER: 60/277,379
  PRIOR FILING DATE: 2001-03-21
 PRIOR APPLICATION NUMBER: 60/276,248
 PRIOR FILING DATE: 2001-03-16
; PRIOR APPLICATION NUMBER: 60/240,816
; PRIOR FILING DATE: 2000-10-17
; PRIOR APPLICATION NUMBER: 60/212,210
  PRIOR FILING DATE: 2000-06-16
  NUMBER OF SEQ ID NOS: 3247
; SEQ ID NO 2310
  LENGTH: 15
   TYPE: PRT
   ORGANISM: Homo sapiens
US-10-293-418-2310
                         68.8%; Score 33; DB 12; Length 15;
  Query Match
  Best Local Similarity 85.7%; Pred. No. 24;
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  Matches
          6; Conservative 0; Mismatches
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                                                                           0;
           3 SYVPLFP 9
Qу
             11111
Db
           8 SYVPLLP 14
RESULT 4
US-09-880-748-2263
; Sequence 2263, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
; APPLICANT: Ruben et al.
```

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TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
  FILE REFERENCE: PF523
  CURRENT APPLICATION NUMBER: US/09/880,748
   CURRENT FILING DATE: 2001-06-15
   PRIOR APPLICATION NUMBER: 60/212,210
   PRIOR FILING DATE: 2000-06-15
  PRIOR APPLICATION NUMBER: 60/240,816
  PRIOR FILING DATE: 2000-10-17
  PRIOR APPLICATION NUMBER: 60/276,248
  PRIOR FILING DATE: 2001-03-16
  PRIOR APPLICATION NUMBER: 60/277,379
  PRIOR FILING DATE: 2001-03-21
  PRIOR APPLICATION NUMBER: 60/293,499
  PRIOR FILING DATE: 2001-05-25
 NUMBER OF SEQ ID NOS: 3239
  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 2263
    LENGTH: 16
    TYPE: PRT
    ORGANISM: Homo sapiens
US-09-880-748-2263
  Query Match
                          68.8%; Score 33; DB 10; Length 16;
  Best Local Similarity
                          85.7%; Pred. No. 26;
  Matches
           6; Conservative
                               0; Mismatches
                                                  1; Indels
                                                                 0; Gaps
                                                                             0;
            3 SYVPLFP 9
Qу
              111111
Db
            8 SYVPLLP 14
RESULT 5
US-10-293-418-2263
; Sequence 2263, Application US/10293418
; Publication No. US20030223996A1
; GENERAL INFORMATION:
; APPLICANT: Ruben et al.
; TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
  FILE REFERENCE: PF523P2
  CURRENT APPLICATION NUMBER: US/10/293,418
  CURRENT FILING DATE: 2002-11-27
  PRIOR APPLICATION NUMBER: 60/331,469
  PRIOR FILING DATE: 2001-11-16
  PRIOR APPLICATION NUMBER: 60/340,817
 PRIOR FILING DATE: 2001-12-19
  PRIOR APPLICATION NUMBER: 09/880,748
  PRIOR FILING DATE: 2001-06-15
  PRIOR APPLICATION NUMBER: 60/293,499
; PRIOR FILING DATE: 2001-05-25
  PRIOR APPLICATION NUMBER: 60/277,379
  PRIOR FILING DATE: 2001-03-21
  PRIOR APPLICATION NUMBER: 60/276,248
  PRIOR FILING DATE: 2001-03-16
  PRIOR APPLICATION NUMBER: 60/240,816
  PRIOR FILING DATE: 2000-10-17
; PRIOR APPLICATION NUMBER: 60/212,210
; PRIOR FILING DATE: 2000-06-16
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NUMBER OF SEQ ID NOS: 3247
; SEQ ID NO 2263
   LENGTH: 16
   TYPE: PRT
   ORGANISM: Homo sapiens
US-10-293-418-2263
  Ouery Match
                         68.8%; Score 33; DB 12; Length 16;
  Best Local Similarity 85.7%; Pred. No. 26;
            6; Conservative
                                                                            0;
                               0; Mismatches
 Matches
                                                1; Indels 0; Gaps
           3 SYVPLFP 9
Qу
             1111111
           8 SYVPLLP 14
Db
RESULT 6
US-09-767-460-64
; Sequence 64, Application US/09767460
; Patent No. US20020009756A1
; GENERAL INFORMATION:
; APPLICANT: Mandell, Arnold
 APPLICANT: Selz, Karen
 APPLICANT: Shlesinger, Michael
  TITLE OF INVENTION: Algorithmic Design of Peptides for Binding and/or
Modulation of the
  TITLE OF INVENTION: Functions of Receptors and/or Other Proteins
  FILE REFERENCE: 01561-0002-CPUS01
  CURRENT APPLICATION NUMBER: US/09/767,460
 CURRENT FILING DATE: 2001-01-23
 NUMBER OF SEQ ID NOS: 96
  SOFTWARE: PatentIn version 3.0
; SEQ ID NO 64
   LENGTH: 10
   TYPE: PRT
   ORGANISM: Artificial Sequence
   FEATURE:
   OTHER INFORMATION: Synthetic
US-09-767-460-64
  Query Match
                         60.4%; Score 29; DB 9; Length 10;
  Best Local Similarity 55.6%; Pred. No. 88;
 Matches
            5; Conservative 2; Mismatches
                                                  2; Indels
                                                                0; Gaps
                                                                            0;
           1 VESYVPLFP 9
Qy
             1::1 | 11
Db
           1 VQTYPPHFP 9
RESULT 7
US-09-764-868-1240
; Sequence 1240, Application US/09764868
; Patent No. US20020168711A1
; GENERAL INFORMATION:
; APPLICANT: Rosen et al.
; TITLE OF INVENTION: Nucleic Acids, Proteins, and Antibodies
; FILE REFERENCE: PTZ32
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; CURRENT APPLICATION NUMBER: US/09/764,868
; CURRENT FILING DATE: 2001-01-17
 Prior application data removed - refer to PALM or file wrapper
; NUMBER OF SEQ ID NOS: 1510
  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 1240
   LENGTH: 13
   TYPE: PRT
   ORGANISM: Homo sapiens
US-09-764-868-1240
                         60.4%; Score 29; DB 9; Length 13;
  Query Match
  Best Local Similarity 71.4%; Pred. No. 1.2e+02;
 Matches
           5; Conservative
                              1; Mismatches
                                                1; Indels
                                                                0; Gaps
                                                                            0;
           3 SYVPLFP 9
Qv
             1111: 1
Db
           1 SYVPMSP 7
RESULT 8
US-09-955-999-120
; Sequence 120, Application US/09955999
; Publication No. US20030036505A1
; GENERAL INFORMATION:
; APPLICANT: Barash et al.
; TITLE OF INVENTION: Signal Transduction Pathway Component Polynucleotides,
Polypeptides,
  TITLE OF INVENTION: Antibodies, and Methods Based Thereon
  FILE REFERENCE: PT086P1
  CURRENT APPLICATION NUMBER: US/09/955,999
  CURRENT FILING DATE: 2001-09-20
; PRIOR APPLICATION NUMBER: 60/234,997
; PRIOR FILING DATE: 2000-09-25
; NUMBER OF SEQ ID NOS: 139
  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 120
   LENGTH: 13
   TYPE: PRT
    ORGANISM: Homo sapiens
US-09-955-999-120
  Query Match
                         60.4%; Score 29; DB 10; Length 13;
  Best Local Similarity 71.4%; Pred. No. 1.2e+02;
           5; Conservative 1; Mismatches 1; Indels
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                                                                            0;
  Matches
            3 SYVPLFP 9
Qу
             1111: 1
Db
           1 SYVPMSP 7
RESULT 9
US-09-880-748-2657
; Sequence 2657, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
; APPLICANT: Ruben et al.
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TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
  FILE REFERENCE: PF523
  CURRENT APPLICATION NUMBER: US/09/880,748
  CURRENT FILING DATE: 2001-06-15
  PRIOR APPLICATION NUMBER: 60/212,210
  PRIOR FILING DATE: 2000-06-15
  PRIOR APPLICATION NUMBER: 60/240,816
; PRIOR FILING DATE: 2000-10-17
; PRIOR APPLICATION NUMBER: 60/276,248
  PRIOR FILING DATE: 2001-03-16
 PRIOR APPLICATION NUMBER: 60/277,379
  PRIOR FILING DATE: 2001-03-21
  PRIOR APPLICATION NUMBER: 60/293,499
  PRIOR FILING DATE: 2001-05-25
  NUMBER OF SEQ ID NOS: 3239
  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 2657
   LENGTH: 14
    TYPE: PRT
    ORGANISM: Homo sapiens
US-09-880-748-2657
 Query Match
                          60.4%; Score 29; DB 10; Length 14;
  Best Local Similarity
                          83.3%; Pred. No. 1.3e+02;
 Matches
            5; Conservative
                                 0; Mismatches
                                                  1; Indels
                                                                 0;
                                                                     Gaps
                                                                             0;
            4 YVPLFP 9
Qу
              1 | | | |
            9 YSPLFP 14
Db
RESULT 10
US-10-293-418-2657
; Sequence 2657, Application US/10293418
; Publication No. US20030223996A1
; GENERAL INFORMATION:
 APPLICANT: Ruben et al.
  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
  FILE REFERENCE: PF523P2
  CURRENT APPLICATION NUMBER: US/10/293,418
  CURRENT FILING DATE: 2002-11-27
  PRIOR APPLICATION NUMBER: 60/331,469
  PRIOR FILING DATE: 2001-11-16
  PRIOR APPLICATION NUMBER: 60/340,817
  PRIOR FILING DATE: 2001-12-19
  PRIOR APPLICATION NUMBER: 09/880,748
  PRIOR FILING DATE: 2001-06-15
  PRIOR APPLICATION NUMBER: 60/293,499
  PRIOR FILING DATE: 2001-05-25
  PRIOR APPLICATION NUMBER: 60/277,379
  PRIOR FILING DATE: 2001-03-21
  PRIOR APPLICATION NUMBER: 60/276,248
  PRIOR FILING DATE: 2001-03-16
  PRIOR APPLICATION NUMBER: 60/240,816
  PRIOR FILING DATE: 2000-10-17
  PRIOR APPLICATION NUMBER: 60/212,210
  PRIOR FILING DATE: 2000-06-16
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; NUMBER OF SEQ ID NOS: 3247
; SEQ ID NO 2657
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   ORGANISM: Homo sapiens
US-10-293-418-2657
                         60.4%; Score 29; DB 12; Length 14;
 Query Match
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                                                               0; Gaps
            5; Conservative
           4 YVPLFP 9
Qу
             | | | | | |
           9 YSPLFP 14
RESULT 11
US-09-767-460-93
; Sequence 93, Application US/09767460
; Patent No. US20020009756A1
; GENERAL INFORMATION:
; APPLICANT: Mandell, Arnold
  APPLICANT: Selz, Karen
  APPLICANT: Shlesinger, Michael
  TITLE OF INVENTION: Algorithmic Design of Peptides for Binding and/or
Modulation of the
  TITLE OF INVENTION: Functions of Receptors and/or Other Proteins
  FILE REFERENCE: 01561-0002-CPUS01
; CURRENT APPLICATION NUMBER: US/09/767,460
; CURRENT FILING DATE: 2001-01-23
; NUMBER OF SEQ ID NOS: 96
  SOFTWARE: PatentIn version 3.0
; SEQ ID NO 93
   LENGTH: 10
    TYPE: PRT
   ORGANISM: Artificial Sequence
   FEATURE:
    OTHER INFORMATION: Synthetic
US-09-767-460-93
  Query Match
                         58.3%; Score 28; DB 9; Length 10;
  Best Local Similarity 71.4%; Pred. No. 1.4e+02;
           5; Conservative 0; Mismatches 2; Indels
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                                                                           0;
  Matches
           3 SYVPLFP 9
Qу
             3 SYTPEFP 9
Db
RESULT 12
US-10-161-791-446
; Sequence 446, Application US/10161791
; Publication No. US20030186863A1
; GENERAL INFORMATION:
     APPLICANT: SPARKS, Andrew B.
     APPLICANT: KAY, Brian K.
     APPLICANT: THORN, Judith M.
```

```
APPLICANT: QUILLIAM, Lawrence A.
    APPLICANT: DER, Channing J.
    APPLICANT: FOWLKES, Dana M.
    APPLICANT: RIDER, James E.
    TITLE OF INVENTION: SH3 BINDING PEPTIDES AND METHODS OF
    TITLE OF INVENTION: ISOLATING AND USING SAME
    NUMBER OF SEQUENCES: 467
    CORRESPONDENCE ADDRESS:
     ADDRESSEE: Pennie & Edmonds
     STREET: 1155 Avenue of the Americas
      CITY: New York
     STATE: New York
     COUNTRY: U.S.A.
     ZIP: 10036-2711
   COMPUTER READABLE FORM:
     MEDIUM TYPE: Floppy disk
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
      SOFTWARE: PatentIn Release #1.0, Version #1.30
   CURRENT APPLICATION DATA:
     APPLICATION NUMBER: US/10/161,791
     FILING DATE:
     CLASSIFICATION:
   PRIOR APPLICATION DATA:
    APPLICATION NUMBER: US/08/602,999
     FILING DATE: 16-FEB-1996
    ATTORNEY/AGENT INFORMATION:
    NAME: Misrock, S. Leslie
     REGISTRATION NUMBER: 18,872
     REFERENCE/DOCKET NUMBER: 1101-202
   TELECOMMUNICATION INFORMATION:
      TELEPHONE: (212) 790-9090
      TELEFAX: (212) 869-9741/8864
      TELEX: 66141 PENNIE
 INFORMATION FOR SEQ ID NO: 446:
   SEQUENCE CHARACTERISTICS:
      LENGTH: 17 amino acids
      TYPE: amino acid
      TOPOLOGY: unknown
    MOLECULE TYPE: peptide
US-10-161-791-446
                        58.3%; Score 28; DB 14; Length 17;
 Query Match
 Best Local Similarity 50.0%; Pred. No. 2.3e+02;
         4; Conservative 2; Mismatches 2; Indels 0; Gaps
 Matches
           2 ESYVPLFP 9
Qу
            1 1:1: 1
Db
           6 EWYIPIIP 13
RESULT 13
US-10-161-791-447
; Sequence 447, Application US/10161791
; Publication No. US20030186863A1
; GENERAL INFORMATION:
    APPLICANT: SPARKS, Andrew B.
```

```
APPLICANT: KAY, Brian K.
;
    APPLICANT: THORN, Judith M.
    APPLICANT: QUILLIAM, Lawrence A.
    APPLICANT: DER, Channing J.
    APPLICANT: FOWLKES, Dana M.
    APPLICANT: RIDER, James E.
    TITLE OF INVENTION: SH3 BINDING PEPTIDES AND METHODS OF
    TITLE OF INVENTION: ISOLATING AND USING SAME
    NUMBER OF SEQUENCES: 467
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Pennie & Edmonds
      STREET: 1155 Avenue of the Americas
      CITY: New York
      STATE: New York
      COUNTRY: U.S.A.
      ZIP: 10036-2711
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
      SOFTWARE: PatentIn Release #1.0, Version #1.30
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/10/161,791
      FILING DATE:
      CLASSIFICATION:
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: US/08/602,999
      FILING DATE: 16-FEB-1996
    ATTORNEY/AGENT INFORMATION:
      NAME: Misrock, S. Leslie
      REGISTRATION NUMBER: 18,872
      REFERENCE/DOCKET NUMBER: 1101-202
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: (212) 790-9090
      TELEFAX: (212) 869-9741/8864
      TELEX: 66141 PENNIE
  INFORMATION FOR SEQ ID NO: 447:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 17 amino acids
      TYPE: amino acid
      TOPOLOGY: unknown
    MOLECULE TYPE: peptide
US-10-161-791-447
                         58.3%; Score 28; DB 14; Length 17;
  Query Match
  Best Local Similarity 50.0%; Pred. No. 2.3e+02;
          4; Conservative 2; Mismatches 2; Indels
                                                               0; Gaps
           2 ESYVPLFP 9
Qу
             | |:|: |
           6 EWYIPIIP 13
RESULT 14
US-09-906-393A-5
; Sequence 5, Application US/09906393A
; Publication No. US20030039970A1
```

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; GENERAL INFORMATION:
  APPLICANT: Wang, Zhou
  APPLICANT: Xiao, Wuhan
  TITLE OF INVENTION: METHOD OF PROGNOSING CANCER AND THE PROTEINS INVOLVED
  FILE REFERENCE: 1720-1-001CIP
  CURRENT APPLICATION NUMBER: US/09/906,393A
  CURRENT FILING DATE: 2001-07-16
  PRIOR APPLICATION NUMBER: 60/218,761
  PRIOR FILING DATE: 2000-07-17
  NUMBER OF SEQ ID NOS: 36
  SOFTWARE: PatentIn version 3.1
 SEQ ID NO 5
   LENGTH: 11
   TYPE: PRT
   ORGANISM: homo sapiens
US-09-906-393A-5
                          56.2%; Score 27; DB 10; Length 11;
  Query Match
                         83.3%; Pred. No. 2.3e+02;
  Best Local Similarity
            5; Conservative
                                0; Mismatches 1;
                                                     Indels
                                                                 0; Gaps
                                                                             0;
            4 YVPLFP 9
Qу
              11 111
           5 YVKLFP 10
RESULT 15
US-10-264-309-304
; Sequence 304, Application US/10264309
; Publication No. US20040022794A1
; GENERAL INFORMATION:
  APPLICANT: DURHAM, L. KATHRYN
  APPLICANT: FRIEDMAN, DAVID L.
  APPLICANT: HERATH, HERATH
              KIMMEL, LIDA H.
  APPLICANT:
  APPLICANT: PAREKH, RAJESH B.
              POTTER, DAVID M.
  APPLICANT:
  APPLICANT: ROHLFF, CHRISTIAN
  APPLICANT: SILBER, B. MICHAEL
  APPLICANT: SNYDER, PETER J.
  APPLICANT:
              SOARES, HOLLY D.
              STIGER, THOMAS R.
  APPLICANT:
              SUNDERLAND, P. TREY
  APPLICANT:
   APPLICANT:
              TOWNSEND, ROBERT R.
   APPLICANT:
              WHITE, W. FROST
  APPLICANT: WILLIAMS, STEPHEN A.
   TITLE OF INVENTION: NUCLEIC ACID MOLECULES, POLYPEPTIDES AND USES THEREFOR,
   TITLE OF INVENTION: INCLUDING DIAGNOSIS AND TREATMENT OF ALZHEIMER'S DISEASE
   FILE REFERENCE: POA-002.01
   CURRENT APPLICATION NUMBER: US/10/264,309
   CURRENT FILING DATE: 2002-10-03
   PRIOR APPLICATION NUMBER: 60/326,708
   PRIOR FILING DATE: 2001-10-03
  NUMBER OF SEQ ID NOS: 491
   SOFTWARE: PatentIn Version 2.1
; SEQ ID NO 304
    LENGTH: 12
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TYPE: PRT
    ORGANISM: Homo sapiens
US-10-264-309-304
  Query Match
                           56.2%; Score 27; DB 16; Length 12;
                           83.3%; Pred. No. 2.5e+02;
  Best Local Similarity
                                                                    0; Gaps
                                                                                 0;
  Matches
             5; Conservative
                                  0; Mismatches
                                                   1; Indels
            1 VESYVP 6
Qу
              \mathbf{I} \mathbf{I} \mathbf{I} \mathbf{I} \mathbf{I}
            2 VESYTP 7
Db
RESULT 16
US-09-766-378A-30
; Sequence 30, Application US/09766378A
 Patent No. US20020091079A1
    GENERAL INFORMATION:
         APPLICANT: Rhode, Peter R.
                     Acevedo, Jorge
;
                     Burkhardt, Martin
;
                     Jiao, Jin-an
                     Wong, Hing C.
         TITLE OF INVENTION: SOLUBLE MHC COMPLEXES AND
                              METHODS OF USE THEREOF
         NUMBER OF SEQUENCES: 38
         CORRESPONDENCE ADDRESS:
              ADDRESSEE: Dike, Bronstein, Roberts & Cushman, LLP
              STREET: 130 Water Street
              CITY: Boston
              STATE: MA
              COUNTRY: usa
              ZIP: 02109
         COMPUTER READABLE FORM:
              MEDIUM TYPE: Diskette
              COMPUTER: IBM Compatible
              OPERATING SYSTEM: DOS
              SOFTWARE: FastSEQ for Windows Version 2.0
         CURRENT APPLICATION DATA:
              APPLICATION NUMBER: US/09/766,378A
              FILING DATE: 19-Jan-2001
              CLASSIFICATION: <Unknown>
         PRIOR APPLICATION DATA:
              APPLICATION NUMBER: 08/960,190
              FILING DATE: 29-OCT-1997
         ATTORNEY/AGENT INFORMATION:
              NAME: Corless, Peter F
              REGISTRATION NUMBER: 33,860
              REFERENCE/DOCKET NUMBER: 48002-DIV
         TELECOMMUNICATION INFORMATION:
               TELEPHONE: 617-523-3400
;
               TELEFAX: 617-523-6440
;
              TELEX: <Unknown>
;
    INFORMATION FOR SEQ ID NO: 30:
         SEQUENCE CHARACTERISTICS:
              LENGTH: 11 amino acids
               TYPE: amino acid
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STRANDEDNESS: single
;
             TOPOLOGY: linear
        MOLECULE TYPE: protein
        SEQUENCE DESCRIPTION: SEQ ID NO: 30:
US-09-766-378A-30
  Query Match
                          54.2%; Score 26; DB 9; Length 11;
                         50.0%; Pred. No. 3.5e+02;
  Best Local Similarity
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            4; Conservative 2; Mismatches 2; Indels
                                                                0; Gaps
            2 ESYVPLFP 9
Qу
              1 1:1: 1
            3 EEYMPMEP 10
RESULT 17
US-09-880-748-2533
; Sequence 2533, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
   APPLICANT: Ruben et al.
   TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
  FILE REFERENCE: PF523
  CURRENT APPLICATION NUMBER: US/09/880,748
   CURRENT FILING DATE: 2001-06-15
  PRIOR APPLICATION NUMBER: 60/212,210
  PRIOR FILING DATE: 2000-06-15
   PRIOR APPLICATION NUMBER: 60/240,816
   PRIOR FILING DATE: 2000-10-17
  PRIOR APPLICATION NUMBER: 60/276,248
  PRIOR FILING DATE: 2001-03-16
  PRIOR APPLICATION NUMBER: 60/277,379
  PRIOR FILING DATE: 2001-03-21
  PRIOR APPLICATION NUMBER: 60/293,499
  PRIOR FILING DATE: 2001-05-25
 NUMBER OF SEQ ID NOS: 3239
   SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 2533
    LENGTH: 14
    TYPE: PRT
    ORGANISM: Homo sapiens
US-09-880-748-2533
                                 Score 26; DB 10; Length 14;
  Query Match
                          54.2%;
                         66.7%; Pred. No. 4.5e+02;
  Best Local Similarity
                                                                0; Gaps
                                                                             0:
          4; Conservative
                               1; Mismatches
                                                1; Indels
            4 YVPLFP 9
Qу
              : ||||
            9 HAPLFP 14
RESULT 18
US-09-880-748-2710
; Sequence 2710, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
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; APPLICANT: Ruben et al.
  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
; FILE REFERENCE: PF523
; CURRENT APPLICATION NUMBER: US/09/880,748
; CURRENT FILING DATE: 2001-06-15
  PRIOR APPLICATION NUMBER: 60/212,210
  PRIOR FILING DATE: 2000-06-15
  PRIOR APPLICATION NUMBER: 60/240,816
  PRIOR FILING DATE: 2000-10-17
  PRIOR APPLICATION NUMBER: 60/276,248
  PRIOR FILING DATE: 2001-03-16
  PRIOR APPLICATION NUMBER: 60/277,379
  PRIOR FILING DATE: 2001-03-21
  PRIOR APPLICATION NUMBER: 60/293,499
  PRIOR FILING DATE: 2001-05-25
; NUMBER OF SEQ ID NOS: 3239
  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 2710
   LENGTH: 14
;
   TYPE: PRT
   ORGANISM: Homo sapiens
US-09-880-748-2710
                         54.2%; Score 26; DB 10; Length 14;
  Query Match
  Best Local Similarity 66.7%; Pred. No. 4.5e+02;
            4; Conservative 1; Mismatches
                                                1; Indels
                                                                 0; Gaps
 Matches
            4 YVPLFP 9
Qy
             1 11:1
            9 YSPLYP 14
Db
RESULT 19
US-10-293-418-2533
; Sequence 2533, Application US/10293418
; Publication No. US20030223996A1
; GENERAL INFORMATION:
; APPLICANT: Ruben et al.
; TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
; FILE REFERENCE: PF523P2
  CURRENT APPLICATION NUMBER: US/10/293,418
  CURRENT FILING DATE: 2002-11-27
  PRIOR APPLICATION NUMBER: 60/331,469
   PRIOR FILING DATE: 2001-11-16
   PRIOR APPLICATION NUMBER: 60/340,817
 PRIOR FILING DATE: 2001-12-19
   PRIOR APPLICATION NUMBER: 09/880,748
   PRIOR FILING DATE: 2001-06-15
   PRIOR APPLICATION NUMBER: 60/293,499
  PRIOR FILING DATE: 2001-05-25
   PRIOR APPLICATION NUMBER: 60/277,379
   PRIOR FILING DATE: 2001-03-21
; PRIOR APPLICATION NUMBER: 60/276,248
; PRIOR FILING DATE: 2001-03-16
; PRIOR APPLICATION NUMBER: 60/240,816
; PRIOR FILING DATE: 2000-10-17
; PRIOR APPLICATION NUMBER: 60/212,210
```

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; PRIOR FILING DATE: 2000-06-16
; NUMBER OF SEQ ID NOS: 3247
; SEQ ID NO 2533
; LENGTH: 14
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-293-418-2533
                        54.2%; Score 26; DB 12; Length 14;
 Query Match
 Best Local Similarity 66.7%; Pred. No. 4.5e+02;
 Matches 4; Conservative 1; Mismatches 1; Indels
                                                               0; Gaps
           4 YVPLFP 9
QУ
            : ||||
           9 HAPLFP 14
RESULT 20
US-10-293-418-2710
; Sequence 2710, Application US/10293418
; Publication No. US20030223996A1
; GENERAL INFORMATION:
; APPLICANT: Ruben et al.
; TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
; FILE REFERENCE: PF523P2
  CURRENT APPLICATION NUMBER: US/10/293,418
  CURRENT FILING DATE: 2002-11-27
  PRIOR APPLICATION NUMBER: 60/331,469
; PRIOR FILING DATE: 2001-11-16
; PRIOR APPLICATION NUMBER: 60/340,817
; PRIOR FILING DATE: 2001-12-19
; PRIOR APPLICATION NUMBER: 09/880,748
; PRIOR FILING DATE: 2001-06-15
; PRIOR APPLICATION NUMBER: 60/293,499
  PRIOR FILING DATE: 2001-05-25
  PRIOR APPLICATION NUMBER: 60/277,379
; PRIOR FILING DATE: 2001-03-21
; PRIOR APPLICATION NUMBER: 60/276,248
; PRIOR FILING DATE: 2001-03-16
; PRIOR APPLICATION NUMBER: 60/240,816
; PRIOR FILING DATE: 2000-10-17
; PRIOR APPLICATION NUMBER: 60/212,210
; PRIOR FILING DATE: 2000-06-16
; NUMBER OF SEQ ID NOS: 3247
; SEQ ID NO 2710
   LENGTH: 14
   TYPE: PRT
   ORGANISM: Homo sapiens
US-10-293-418-2710
                         54.2%; Score 26; DB 12; Length 14;
 Query Match
  Best Local Similarity 66.7%; Pred. No. 4.5e+02;
                               1; Mismatches 1; Indels 0; Gaps
                                                                           0;
          4; Conservative
            4 YVPLFP 9
Qy
             | ||:|
            9 YSPLYP 14
```

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RESULT 21
US-10-281-478-74
; Sequence 74, Application US/10281478
; Publication No. US20030108959A1
; GENERAL INFORMATION:
; APPLICANT: Immunex Corporation
  APPLICANT: Johnson, Richard S.
  APPLICANT: Guo, Lin
  APPLICANT: Mahimkar, Rajeev M.
 APPLICANT: Peschon, Jacques J.
  APPLICANT: Black, Roy A.
  TITLE OF INVENTION: TREATING DISEASES MEDIATED BY METALLOPROTEASE-SHED
PROTEINS
  FILE REFERENCE: 3327-A
  CURRENT APPLICATION NUMBER: US/10/281,478
  CURRENT FILING DATE: 2002-10-25
; NUMBER OF SEQ ID NOS: 158
  SOFTWARE: PatentIn version 3.1
; SEQ ID NO 74
   LENGTH: 15
   TYPE: PRT
   ORGANISM: Artificial Sequence
   FEATURE:
   OTHER INFORMATION: peptide
   FEATURE:
   NAME/KEY: MOD RES
   LOCATION: (13)..(13)
   OTHER INFORMATION: methionine sulfoxide
US-10-281-478-74
  Query Match
                         54.2%;
                                 Score 26; DB 14; Length 15;
  Best Local Similarity 57.1%; Pred. No. 4.8e+02;
                                                                            0;
            4; Conservative
                                3; Mismatches 0; Indels
                                                                0; Gaps
  Matches
Qу
           1 VESYVPL 7
             1:11:1:
           3 VDSYLPV 9
Db
RESULT 22
US-09-880-748-2261
; Sequence 2261, Application US/09880748
; Publication No. US20030059937A1
; GENERAL INFORMATION:
; APPLICANT: Ruben et al.
  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
  FILE REFERENCE: PF523
  CURRENT APPLICATION NUMBER: US/09/880,748
  CURRENT FILING DATE: 2001-06-15
  PRIOR APPLICATION NUMBER: 60/212,210
; PRIOR FILING DATE: 2000-06-15
; PRIOR APPLICATION NUMBER: 60/240,816
; PRIOR FILING DATE: 2000-10-17
; PRIOR APPLICATION NUMBER: 60/276,248
; PRIOR FILING DATE: 2001-03-16
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PRIOR FILING DATE: 2001-03-21
  PRIOR APPLICATION NUMBER: 60/293,499
  PRIOR FILING DATE: 2001-05-25
; NUMBER OF SEQ ID NOS: 3239
  SOFTWARE: PatentIn Ver. 2.0
; SEO ID NO 2261
  LENGTH: 16
   TYPE: PRT
   ORGANISM: Homo sapiens
US-09-880-748-2261
                         54.2%; Score 26; DB 10; Length 16;
  Query Match
  Best Local Similarity 71.4%; Pred. No. 5.2e+02;
           5; Conservative 0; Mismatches
                                               2; Indels
                                                                0; Gaps
                                                                            0;
           3 SYVPLFP 9
Qy
             8 SYVPCSP 14
Db
RESULT 23
US-10-293-418-2261
; Sequence 2261, Application US/10293418
; Publication No. US20030223996A1
; GENERAL INFORMATION:
  APPLICANT: Ruben et al.
  TITLE OF INVENTION: Antibodies that Immunospecifically Bind BLyS
  FILE REFERENCE: PF523P2
  CURRENT APPLICATION NUMBER: US/10/293,418
  CURRENT FILING DATE: 2002-11-27
  PRIOR APPLICATION NUMBER: 60/331,469
 PRIOR FILING DATE: 2001-11-16
  PRIOR APPLICATION NUMBER: 60/340,817
  PRIOR FILING DATE: 2001-12-19
  PRIOR APPLICATION NUMBER: 09/880,748
  PRIOR FILING DATE: 2001-06-15
  PRIOR APPLICATION NUMBER: 60/293,499
  PRIOR FILING DATE: 2001-05-25
  PRIOR APPLICATION NUMBER: 60/277,379
  PRIOR FILING DATE: 2001-03-21
  PRIOR APPLICATION NUMBER: 60/276,248
  PRIOR FILING DATE: 2001-03-16
  PRIOR APPLICATION NUMBER: 60/240,816
  PRIOR FILING DATE: 2000-10-17
  PRIOR APPLICATION NUMBER: 60/212,210
  PRIOR FILING DATE: 2000-06-16
  NUMBER OF SEQ ID NOS: 3247
; SEO ID NO 2261
   LENGTH: 16
    TYPE: PRT
    ORGANISM: Homo sapiens
US-10-293-418-2261
                         54.2%; Score 26; DB 12; Length 16;
  Query Match
  Best Local Similarity 71.4%; Pred. No. 5.2e+02;
            5; Conservative 0; Mismatches 2; Indels
                                                                0; Gaps
  Matches
```

PRIOR APPLICATION NUMBER: 60/277,379

```
3 SYVPLFP 9
Qу
             8 SYVPCSP 14
Db
RESULT 24
US-09-820-296-5
; Sequence 5, Application US/09820296
; Patent No. US20010048424A1
; GENERAL INFORMATION:
  APPLICANT: Kasahara, Hiroyuki
  APPLICANT: Davin, Laurence
; APPLICANT: Lewis, No. US20010048424A1man
  TITLE OF INVENTION: ARYL PROPENAL DOUBLE BOND REDUCTASE
; FILE REFERENCE: WSUR-1-17233
  CURRENT APPLICATION NUMBER: US/09/820,296
; CURRENT FILING DATE: 2001-05-29
; PRIOR APPLICATION NUMBER: US 60/192,266
  PRIOR FILING DATE: 2000-03-27
; NUMBER OF SEQ ID NOS: 13
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 5
   LENGTH: 18
   TYPE: PRT
   ORGANISM: Pinus Taeda
US-09-820-296-5
  Query Match
                         54.2%; Score 26; DB 9; Length 18;
  Best Local Similarity 66.7%; Pred. No. 5.8e+02;
          4; Conservative
                             1; Mismatches
                                               1; Indels
                                                               0; Gaps
                                                                            0;
           4 YVPLFP 9
Qу
             1:1 11
           7 YLPSFP 12
RESULT 25
US-09-820-096B-5
; Sequence 5, Application US/09820096B
; Publication No. US20030022168A1
; GENERAL INFORMATION:
; APPLICANT: Kasahara, Hiroyuki
; APPLICANT: Davin, Laurence
; APPLICANT: Lewis, No. US20030022168Alman
  TITLE OF INVENTION: ARYL PROPENAL DOUBLE BOND REDUCTASE
  FILE REFERENCE: WSUR-1-17233
; CURRENT APPLICATION NUMBER: US/09/820,096B
  CURRENT FILING DATE: 2001-03-27
  PRIOR APPLICATION NUMBER: US 60/192,266
  PRIOR FILING DATE: 2000-03-27
; NUMBER OF SEQ ID NOS: 13
  SOFTWARE: PatentIn version 3.0
; SEQ ID NO 5
   LENGTH: 18
;
   TYPE: PRT
   ORGANISM: Pinus Taeda
```

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54.2%; Score 26; DB 10; Length 18;
  Query Match
  Best Local Similarity 66.7%; Pred. No. 5.8e+02;
                                                                0; Gaps
                                                                            0;
           4; Conservative 1; Mismatches 1; Indels
            4 YVPLFP 9
Qv
             1:1 11
           7 YLPSFP 12
Db
RESULT 26
US-10-258-146A-144
; Sequence 144, Application US/10258146A
; Publication No. US20040052812A1
; GENERAL INFORMATION:
; APPLICANT: Mee Hoe
  APPLICANT: Frank Landsberger
  TITLE OF INVENTION: HEAT SHOCK PROTEIN-BASED ANTIVIRAL
; TITLE OF INVENTION: VACCINES
; FILE REFERENCE: 11390/46301
  CURRENT APPLICATION NUMBER: US/10/258,146A
  CURRENT FILING DATE: 2003-09-05
  PRIOR APPLICATION NUMBER: PCT/US01/12568
  PRIOR FILING DATE: 2001-04-17
  PRIOR APPLICATION NUMBER: 60/197,462
  PRIOR FILING DATE: 2000-04-17
; NUMBER OF SEQ ID NOS: 180
; SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 144
   LENGTH: 7
   TYPE: PRT
    ORGANISM: Artificial Sequence
    FEATURE:
    OTHER INFORMATION: obtained from a phage synthetic peptide library
US-10-258-146A-144
  Query Match
                         52.1%; Score 25; DB 12; Length 7;
  Best Local Similarity
                         83.3%; Pred. No. 1.2e+06;
                               0; Mismatches
           5; Conservative
                                                1; Indels
                                                                0; Gaps
                                                                            0;
Qу
            4 YVPLFP 9
              I \cup I \cup I
            2 YVPLPP 7
RESULT 27
US-10-328-953-289
; Sequence 289, Application US/10328953
; Publication No. US20040071656A1
; GENERAL INFORMATION:
; APPLICANT: Wieland, Felix
; APPLICANT: Hartl, Franz-Ulrich
; TITLE OF INVENTION: Modulation of Heat-Shock-Protein-Based Immunotherapies
; FILE REFERENCE: 11390/46101
; CURRENT APPLICATION NUMBER: US/10/328,953
; CURRENT FILING DATE: 2002-12-23
```

```
; PRIOR APPLICATION NUMBER: US 60/342,570
; PRIOR FILING DATE: 2001-12-26
; PRIOR APPLICATION NUMBER: US 60/343,884
  PRIOR FILING DATE: 2001-12-28
  PRIOR APPLICATION NUMBER: US 60/372,620
  PRIOR FILING DATE: 2002-04-12
  PRIOR APPLICATION NUMBER: US 60/399,342
  PRIOR FILING DATE: 2002-07-29
  PRIOR APPLICATION NUMBER: US 60/414,834
  PRIOR FILING DATE: 2002-09-28
  NUMBER OF SEQ ID NOS: 331
  SOFTWARE: WordPerfect 8.0 for Windows
; SEO ID NO 289
   LENGTH: 7
   TYPE: PRT
   ORGANISM: Artificial Sequence
   FEATURE:
   OTHER INFORMATION: peptide in m13 coliphage
US-10-328-953-289
  Query Match
                         52.1%; Score 25; DB 12; Length 7;
  Best Local Similarity
                         83.3%; Pred. No. 1.2e+06;
 Matches
           5; Conservative 0; Mismatches
                                                1; Indels
                                                                0; Gaps
                                                                            0:
Qу
           4 YVPLFP 9
              11111
           2 YVPLPP 7
Db
RESULT 28
US-10-052-578-286
; Sequence 286, Application US/10052578
; Publication No. US20030134787A1
; GENERAL INFORMATION:
  APPLICANT: Sloan-Kettering Institute for Cancer Research
             Rothman, James E.
  APPLICANT:
  APPLICANT: Mayhew, Mark
  APPLICANT: Hoe, Mee H.
  APPLICANT: Houghton, Alan
  APPLICANT: Hartl, Ulrich
  APPLICANT: Ouerfelli, Ouathek
  APPLICANT: Moroi, Yoichi
  TITLE OF INVENTION: CONJUGATE HEAT SHOCK PROTEIN-BINDING PEPTIDES
  FILE REFERENCE: 11746/46003
  CURRENT APPLICATION NUMBER: US/10/052,578
  CURRENT FILING DATE: 2002-01-17
  PRIOR APPLICATION NUMBER: 08/961,707
  PRIOR FILING DATE: 1997-10-31
  NUMBER OF SEQ ID NOS: 321
  SOFTWARE: WordPerfect 8.0 for Windows
; SEQ ID NO 286
   LENGTH: 7
   TYPE: PRT
   ORGANISM: Artificial Sequence
   FEATURE:
   OTHER INFORMATION: peptide in m13 coliphage
US-10-052-578-286
```

```
52.1%; Score 25; DB 14; Length 7;
  Best Local Similarity 83.3%; Pred. No. 1.2e+06;
                                                                0; Gaps
            5; Conservative 0; Mismatches
                                               1; Indels
                                                                            0;
 Matches
           4 YVPLFP 9
Qу
             1111 1
Db
           2 YVPLPP 7
RESULT 29
US-10-053-520-286
; Sequence 286, Application US/10053520
; Publication No. US20030166530A1
; GENERAL INFORMATION:
  APPLICANT: Sloan-Kettering Institute for Cancer Research
  APPLICANT: Rothman, James E.
  APPLICANT: Mayhew, Mark
  APPLICANT: Hoe, Mee H.
  APPLICANT: Houghton, Alan
  APPLICANT: Hartl, Ulrich
  APPLICANT: Ouerfelli, Ouathek
; APPLICANT: Moroi, Yoichi
  TITLE OF INVENTION: CONJUGATE HEAT SHOCK PROTEIN-BINDING PEPTIDES
  FILE REFERENCE: 11746/46004
  CURRENT APPLICATION NUMBER: US/10/053,520
  CURRENT FILING DATE: 2002-10-01
  PRIOR APPLICATION NUMBER: 08/961,707
  PRIOR FILING DATE: 1997-10-31
  NUMBER OF SEQ ID NOS: 321
  SOFTWARE: WordPerfect 8.0 for Windows
; SEQ ID NO 286
   LENGTH: 7
    TYPE: PRT
    ORGANISM: Artificial Sequence
    FEATURE:
    OTHER INFORMATION: peptide in ml3 coliphage
US-10-053-520-286
                         52.1%; Score 25; DB 14; Length 7;
  Query Match
  Best Local Similarity 83.3%; Pred. No. 1.2e+06;
           5; Conservative
                               0; Mismatches 1; Indels
                                                                0; Gaps
                                                                            0;
  Matches
            4 YVPLFP 9
Qу
              1111
            2 YVPLPP 7
Db
RESULT 30
US-10-053-498B-286
; Sequence 286, Application US/10053498B
; Publication No. US20030194409A1
; GENERAL INFORMATION:
  APPLICANT: Sloan-Kettering Institute for Cancer Research
  APPLICANT: Rothman, James E.
; APPLICANT: Mayhew, Mark
; APPLICANT: Hoe, Mee H.
```

```
; APPLICANT: Hartl, Ulrich
; APPLICANT: Ouerfelli, Ouathek
  APPLICANT: Moroi, Yoichi
  TITLE OF INVENTION: CONJUGATE HEAT SHOCK PROTEIN-BINDING PEPTIDES
; FILE REFERENCE: 11746/46002
; CURRENT APPLICATION NUMBER: US/10/053,498B
; CURRENT FILING DATE: 2002-01-17
; PRIOR APPLICATION NUMBER: 08/961,707
; PRIOR FILING DATE: 1997-10-31
; NUMBER OF SEQ ID NOS: 321
 SOFTWARE: WordPerfect 8.0 for Windows
; SEQ ID NO 286
   LENGTH: 7
   TYPE: PRT
   ORGANISM: Artificial Sequence
   OTHER INFORMATION: peptide in m13 coliphage
US-10-053-498B-286
 Query Match 52.1%; Score 25; DB 14; Length 7; Best Local Similarity 83.3%; Pred. No. 1.2e+06;
 Matches 5; Conservative 0; Mismatches 1; Indels
                                                               0; Gaps
           4 YVPLFP 9
Qy
             2 YVPLPP 7
RESULT 31
US-10-258-144-179
; Sequence 179, Application US/10258144
; Publication No. US20040101532A1
; GENERAL INFORMATION:
; APPLICANT: Houghton, Alan
; APPLICANT: Livingston, Phil
; APPLICANT: Al-Awqati, Qais
  APPLICANT: Mayhew, Mark
; APPLICANT: Hoe, Mee
  TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR HEAT SHOCK
; TITLE OF INVENTION: PROTEIN MEDIATED IMMUNOTHERAPY OF MELANOMA
  FILE REFERENCE: 11746/46401
  CURRENT APPLICATION NUMBER: US/10/258,144
  CURRENT FILING DATE: 2002-10-17
  PRIOR APPLICATION NUMBER: 60/197,642
  PRIOR FILING DATE: 2000-04-17
   NUMBER OF SEQ ID NOS: 502
  SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 179
   LENGTH: 7
    TYPE: PRT
    ORGANISM: m13 coliphage insert
US-10-258-144-179
                         52.1%; Score 25; DB 16; Length 7;
  Query Match
  Best Local Similarity 83.3%; Pred. No. 1.2e+06;
  Matches 5; Conservative 0; Mismatches 1; Indels 0; Gaps
                                                                            0;
```

; APPLICANT: Houghton, Alan

```
4 YVPLFP 9
Qу
             111111
           2 YVPLPP 7
RESULT 32
US-10-328-953-126
; Sequence 126, Application US/10328953
; Publication No. US20040071656A1
; GENERAL INFORMATION:
; APPLICANT: Wieland, Felix
; APPLICANT: Hartl, Franz-Ulrich
 TITLE OF INVENTION: Modulation of Heat-Shock-Protein-Based Immunotherapies
  FILE REFERENCE: 11390/46101
  CURRENT APPLICATION NUMBER: US/10/328,953
  CURRENT FILING DATE: 2002-12-23
  PRIOR APPLICATION NUMBER: US 60/342,570
  PRIOR FILING DATE: 2001-12-26
  PRIOR APPLICATION NUMBER: US 60/343,884
  PRIOR FILING DATE: 2001-12-28
  PRIOR APPLICATION NUMBER: US 60/372,620
  PRIOR FILING DATE: 2002-04-12
  PRIOR APPLICATION NUMBER: US 60/399,342
  PRIOR FILING DATE: 2002-07-29
  PRIOR APPLICATION NUMBER: US 60/414,834
  PRIOR FILING DATE: 2002-09-28
  NUMBER OF SEQ ID NOS: 331
  SOFTWARE: WordPerfect 8.0 for Windows
; SEQ ID NO 126
   LENGTH: 8
   TYPE: PRT
   ORGANISM: Artificial Sequence
    FEATURE:
    OTHER INFORMATION: peptide in m13 coliphage
US-10-328-953-126
                         52.1%; Score 25; DB 12; Length 8;
 Query Match
  Best Local Similarity
                         83.3%; Pred. No. 1.2e+06;
                                                                            0;
 Matches
          5; Conservative
                                0; Mismatches
                                               1; Indels
                                                                0; Gaps
           4 YVPLFP 9
Qу
              2 YVPLPP 7
RESULT 33
US-10-052-578-82
; Sequence 82, Application US/10052578
; Publication No. US20030134787A1
; GENERAL INFORMATION:
; APPLICANT: Sloan-Kettering Institute for Cancer Research
; APPLICANT: Rothman, James E.
; APPLICANT: Mayhew, Mark
; APPLICANT: Hoe, Mee H.
; APPLICANT: Houghton, Alan
```

; APPLICANT: Hartl, Ulrich

```
; APPLICANT: Ouerfelli, Ouathek
; APPLICANT: Moroi, Yoichi
  TITLE OF INVENTION: CONJUGATE HEAT SHOCK PROTEIN-BINDING PEPTIDES
  FILE REFERENCE: 11746/46003
; CURRENT APPLICATION NUMBER: US/10/052,578
; CURRENT FILING DATE: 2002-01-17
; PRIOR APPLICATION NUMBER: 08/961,707
; PRIOR FILING DATE: 1997-10-31
; NUMBER OF SEQ ID NOS: 321
; SOFTWARE: WordPerfect 8.0 for Windows
; SEQ ID NO 82
  LENGTH: 8
   TYPE: PRT
  ORGANISM: Artificial Sequence
  FEATURE:
  OTHER INFORMATION: peptide in ml3 coliphage
US-10-052-578-82
                         52.1%; Score 25; DB 14; Length 8;
  Query Match
 Best Local Similarity
                         83.3%; Pred. No. 1.2e+06;
 Matches
           5; Conservative
                               0; Mismatches
                                               1; Indels
                                                            0; Gaps
           4 YVPLFP 9
Qу
             Db
           2 YVPLPP 7
RESULT 34
US-10-053-520-82
; Sequence 82, Application US/10053520
; Publication No. US20030166530A1
; GENERAL INFORMATION:
; APPLICANT: Sloan-Kettering Institute for Cancer Research
; APPLICANT: Rothman, James E.
 APPLICANT: Mayhew, Mark
  APPLICANT: Hoe, Mee H.
  APPLICANT: Houghton, Alan
; APPLICANT: Hartl, Ulrich
; APPLICANT: Ouerfelli, Ouathek
; APPLICANT: Moroi, Yoichi
; TITLE OF INVENTION: CONJUGATE HEAT SHOCK PROTEIN-BINDING PEPTIDES
; FILE REFERENCE: 11746/46004
; CURRENT APPLICATION NUMBER: US/10/053,520
; CURRENT FILING DATE: 2002-10-01
 PRIOR APPLICATION NUMBER: 08/961,707
  PRIOR FILING DATE: 1997-10-31
; NUMBER OF SEQ ID NOS: 321
; SOFTWARE: WordPerfect 8.0 for Windows
; SEO ID NO 82
   LENGTH: 8
   TYPE: PRT
   ORGANISM: Artificial Sequence
   FEATURE:
   OTHER INFORMATION: peptide in m13 coliphage
US-10-053-520-82
  Query Match
                         52.1%; Score 25; DB 14; Length 8;
```

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5; Conservative
                               0; Mismatches 1; Indels
                                                               0; Gaps
                                                                           0;
           4 YVPLFP 9
Qу
             1111 1
           2 YVPLPP 7
RESULT 35
US-10-053-498B-82
; Sequence 82, Application US/10053498B
; Publication No. US20030194409A1
; GENERAL INFORMATION:
; APPLICANT: Sloan-Kettering Institute for Cancer Research
; APPLICANT: Rothman, James E.
; APPLICANT: Mayhew, Mark
  APPLICANT: Hoe, Mee H.
  APPLICANT: Houghton, Alan
  APPLICANT: Hartl, Ulrich
  APPLICANT: Ouerfelli, Ouathek
  APPLICANT: Moroi, Yoichi
  TITLE OF INVENTION: CONJUGATE HEAT SHOCK PROTEIN-BINDING PEPTIDES
; FILE REFERENCE: 11746/46002
  CURRENT APPLICATION NUMBER: US/10/053,498B
  CURRENT FILING DATE: 2002-01-17
  PRIOR APPLICATION NUMBER: 08/961,707
  PRIOR FILING DATE: 1997-10-31
  NUMBER OF SEQ ID NOS: 321
  SOFTWARE: WordPerfect 8.0 for Windows
; SEQ ID NO 82
   LENGTH: 8
   TYPE: PRT
   ORGANISM: Artificial Sequence
   OTHER INFORMATION: peptide in m13 coliphage
US-10-053-498B-82
                         52.1%; Score 25; DB 14; Length 8;
  Query Match
  Best Local Similarity 83.3%; Pred. No. 1.2e+06;
 Matches
          5; Conservative 0; Mismatches
                                               1; Indels
                                                               0;
                                                                   Gaps
                                                                           0;
           4 YVPLFP 9
             11111
           2 YVPLPP 7
RESULT 36
US-10-028-075B-108
; Sequence 108, Application US/10028075B
; Publication No. US20030113733A1
; GENERAL INFORMATION:
; APPLICANT: Khan, Nisar A.
 APPLICANT: Benner, Robert
  TITLE OF INVENTION: Gene regulator
; FILE REFERENCE: 2183-5223US
; CURRENT APPLICATION NUMBER: US/10/028,075B
; CURRENT FILING DATE: 2001-12-21
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Best Local Similarity 83.3%; Pred. No. 1.2e+06;

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; PRIOR APPLICATION NUMBER: EP 01203748.7
 PRIOR FILING DATE: 2001-10-04
; NUMBER OF SEQ ID NOS: 175
  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 108
   LENGTH: 14
   TYPE: PRT
   ORGANISM: Artificial Sequence
   FEATURE:
   OTHER INFORMATION: Description of Artificial Sequence: Mm.129320.2
US-10-028-075B-108
  Query Match
                         52.1%; Score 25; DB 14; Length 14;
  Best Local Similarity 44.4%; Pred. No. 6.9e+02;
           4; Conservative 2; Mismatches 3; Indels
                                                               0; Gaps
 Matches
                                                                           0;
           1 VESYVPLFP 9
Qу
             1: 11: 1
           2 VQKVVPMLP 10
Db
RESULT 37
US-10-029-206A-108
; Sequence 108, Application US/10029206A
; Publication No. US20030119720A1
; GENERAL INFORMATION:
  APPLICANT: Khan, Nisar A.
  APPLICANT: Benner, Robert
  TITLE OF INVENTION: Oligopeptide treatment of anthrax
  FILE REFERENCE: 2183-5222US
  CURRENT APPLICATION NUMBER: US/10/029,206A
  CURRENT FILING DATE: 2001-12-21
  PRIOR APPLICATION NUMBER: 09/821,380
 PRIOR FILING DATE: 2001-03-29
; NUMBER OF SEQ ID NOS: 175
  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 108
   LENGTH: 14
   TYPE: PRT
   ORGANISM: Artificial Sequence
   OTHER INFORMATION: Description of Artificial Sequence: Mm.129320.2
US-10-029-206A-108
                         52.1%; Score 25; DB 14; Length 14;
  Query Match
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           1 VESYVPLFP 9
Qу
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           2 VOKVVPMLP 10
RESULT 38
US-10-161-791-379
; Sequence 379, Application US/10161791
; Publication No. US20030186863A1
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GENERAL INFORMATION:
    APPLICANT: SPARKS, Andrew B.
    APPLICANT: KAY, Brian K. APPLICANT: THORN, Judith M.
    APPLICANT: QUILLIAM, Lawrence A.
    APPLICANT: DER, Channing J.
    APPLICANT: FOWLKES, Dana M.
    APPLICANT: RIDER, James E.
    TITLE OF INVENTION: SH3 BINDING PEPTIDES AND METHODS OF
    TITLE OF INVENTION: ISOLATING AND USING SAME
    NUMBER OF SEQUENCES: 467
    CORRESPONDENCE ADDRESS:
     ADDRESSEE: Pennie & Edmonds
      STREET: 1155 Avenue of the Americas
      CITY: New York
      STATE: New York
    COUNTRY: U.S.A.
     ZIP: 10036-2711
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
      SOFTWARE: PatentIn Release #1.0, Version #1.30
    CURRENT APPLICATION DATA:
    APPLICATION NUMBER: US/10/161,791
     FILING DATE:
      CLASSIFICATION:
    PRIOR APPLICATION DATA:
    APPLICATION NUMBER: US/08/602,999
      FILING DATE: 16-FEB-1996
    ATTORNEY/AGENT INFORMATION:
     NAME: Misrock, S. Leslie
      REGISTRATION NUMBER: 18,872
      REFERENCE/DOCKET NUMBER: 1101-202
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: (212) 790-9090
      TELEFAX: (212) 869-9741/8864
      TELEX: 66141 PENNIE
  INFORMATION FOR SEQ ID NO: 379:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 15 amino acids
      TYPE: amino acid
      TOPOLOGY: unknown
    MOLECULE TYPE: peptide
US-10-161-791-379
                         52.1%; Score 25; DB 14; Length 15;
  Query Match
 Best Local Similarity 80.0%; Pred. No. 7.4e+02;
           4; Conservative 1; Mismatches 0; Indels 0; Gaps
 Matches
           5 VPLFP 9
Qу
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          7 LPLFP 11
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RESULT 39 US-10-239-423-55

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; Sequence 55, Application US/10239423
; Publication No. US20030186889A1
; GENERAL INFORMATION:
  APPLICANT: FORSSMANN, Wolf-Georg; FORSSMANN, Ulf; ADERMANN, Knut;
  APPLICANT: HEITLAND, Aleksandra; SPODSBERG, Nikolaj
  TITLE OF INVENTION: Diagnostic Agent and Medicament for Examining the
  TITLE OF INVENTION: Cell Surface Proteome of Tumor and Inflammation Cells
and
                        for Treating Tumor Diseases and Inflammatory Diseases,
  TITLE OF INVENTION:
                        Preferably with the Aid of Specific Chemokine
  TITLE OF INVENTION:
                        Receptor Analysis and Chemokine Receptor/Ligand
  TITLE OF INVENTION:
Interaction
  FILE REFERENCE: 022217us
  CURRENT APPLICATION NUMBER: US/10/239,423
  CURRENT FILING DATE: 2002-09-23
  PRIOR APPLICATION NUMBER: DE10016013.1
  PRIOR FILING DATE: 2000-03-31
  NUMBER OF SEQ ID NOS: 84
  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 55
    LENGTH: 15
    TYPE: PRT
    ORGANISM: Artificial Sequence
    OTHER INFORMATION: Description of Artificial Sequence:
    OTHER INFORMATION: Amino Acid Sequence for the Generation of Antibodies
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            2 IPIFP 6
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RESULT 40
US-10-275-707-16
; Sequence 16, Application US/10275707
; Publication No. US20030194801A1
; GENERAL INFORMATION:
  APPLICANT: BONALDO, MIRNA C.
  APPLICANT: GALLER, RICARDO
               FREIRE, MARCOS DA SILVA
  APPLICANT:
               GARRAT, RICHARD C.
  APPLICANT:
  TITLE OF INVENTION: USE OF FLAVIVIRUS FOR THE EXPRESSION OF PROTEIN EPITOPES
  TITLE OF INVENTION: AND DEVELOPMENT OF NEW LIVE ATTENUATED VACCINE VIRUS TO
  TITLE OF INVENTION: IMMUNIZE AGAINST FLAVIVIRUS AND OTHER INFECTIOUS AGENTS
   FILE REFERENCE: 3673-21
   CURRENT APPLICATION NUMBER: US/10/275,707
   CURRENT FILING DATE: 2003-04-10
  PRIOR APPLICATION NUMBER: PCT/BR02/00036
   PRIOR FILING DATE: 2002-03-08
   PRIOR APPLICATION NUMBER: GB 0105877.5
   PRIOR FILING DATE: 2001-03-09
; NUMBER OF SEQ ID NOS: 16
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SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 16
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   ORGANISM: Plasmodium yoelii
US-10-275-707-16
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           2 MDSYVP 7
RESULT 41
US-10-432-422-69
; Sequence 69, Application US/10432422
; Publication No. US20040076981A1
; GENERAL INFORMATION:
; APPLICANT: Syngenta Participations AG
; APPLICANT: Cornell Research Foundation, Inc.
; APPLICANT: Yoder, Olen
; APPLICANT: Turgeon, Barbara G.
  APPLICANT: Lu, Shen-wen
; TITLE OF INVENTION: Fungal Iron Reductase Gene
; FILE REFERENCE: 1360.017W01
; CURRENT APPLICATION NUMBER: US/10/432,422
; CURRENT FILING DATE: 2003-05-21
; PRIOR APPLICATION NUMBER: US 60/252,732
; PRIOR FILING DATE: 2000-11-22
; PRIOR APPLICATION NUMBER: US 60/252,649
  PRIOR FILING DATE: 2000-11-22
; NUMBER OF SEQ ID NOS: 210
  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 69
  LENGTH: 15
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US-10-432-422-69
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            3 SYVPLFP 9
Qу
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           7 AYVPIDP 13
Db
RESULT 42
US-10-432-422-70
; Sequence 70, Application US/10432422
; Publication No. US20040076981A1
; GENERAL INFORMATION:
; APPLICANT: Syngenta Participations AG
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; APPLICANT: Cornell Research Foundation, Inc.
  APPLICANT: Yoder, Olen
  APPLICANT: Turgeon, Barbara G.
  APPLICANT: Lu, Shen-wen
  TITLE OF INVENTION: Fungal Iron Reductase Gene
  FILE REFERENCE: 1360.017WO1
; CURRENT APPLICATION NUMBER: US/10/432,422
  CURRENT FILING DATE: 2003-05-21
  PRIOR APPLICATION NUMBER: US 60/252,732
  PRIOR FILING DATE: 2000-11-22
  PRIOR APPLICATION NUMBER: US 60/252,649
; PRIOR FILING DATE: 2000-11-22
; NUMBER OF SEQ ID NOS: 210
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEO ID NO 70
   LENGTH: 15
   TYPE: PRT
   ORGANISM: Aspergillus nidulans
US-10-432-422-70
                          52.1%; Score 25; DB 16; Length 15;
  Query Match
                          57.1%; Pred. No. 7.4e+02;
  Best Local Similarity
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            4; Conservative
                                2; Mismatches
           3 SYVPLFP 9
QУ
              :|||: |
            7 AYVPIDP 13
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RESULT 43
US-10-331-907-403
; Sequence 403, Application US/10331907
; Publication No. US20030181660A1
    GENERAL INFORMATION:
        APPLICANT: Todd, John A
                    Hess, John W
                    Caskey, Charles T
                    Cox, Roger D
                    Gerhold, David
                    Hammond, Holly
                    Hey, Patricia
                    Kawaguchi, Yoshihiko
                    Merriman, Tony R
                    Metzker, Michael L
         TITLE OF INVENTION: No. US20030181660A1el LDL-Receptor
        NUMBER OF SEQUENCES: 455
        CORRESPONDENCE ADDRESS:
              ADDRESSEE: Nixon and Vanderhye
              STREET: 1100 No. US20030181660Alth Glebe Road, Eighth Floor
              CITY: Arlington
              STATE: Virginia
              COUNTRY: US
              ZIP: VA 22201-4714
         COMPUTER READABLE FORM:
              MEDIUM TYPE: Floppy disk
              COMPUTER: IBM PC compatible
              OPERATING SYSTEM: PC-DOS/MS-DOS
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SOFTWARE: PatentIn Release #1.0, Version #1.25 (EPO)
         CURRENT APPLICATION DATA:
              APPLICATION NUMBER: US/10/331,907
              FILING DATE: 31-Dec-2002
         PRIOR APPLICATION DATA:
             APPLICATION NUMBER: US/09/402,923A
              FILING DATE: 14-Feb-2001
              APPLICATION NUMBER: PCT/GB98/01102
              FILING DATE: 15-APR-1998
             APPLICATION NUMBER: US 60/043,553
              FILING DATE: 15-APR-1997
              APPLICATION NUMBER: US 60/048,740
              FILING DATE: 05-JUN-1997
         ATTORNEY/AGENT INFORMATION:
             NAME: B.J.Sadoff
              REGISTRATION NUMBER: 36,663
              REFERENCE/DOCKET NUMBER: 620-81
         TELECOMMUNICATION INFORMATION:
              TELEPHONE: (703)816-4091
              TELEFAX: (703)816-4100
   INFORMATION FOR SEQ ID NO: 403:
         SEQUENCE CHARACTERISTICS:
              LENGTH: 17 amino acids
              TYPE: amino acid
              TOPOLOGY: linear
         SEQUENCE DESCRIPTION: SEQ ID NO: 403:
US-10-331-907-403
 Query Match
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  Best Local Similarity 71.4%; Pred. No. 8.4e+02;
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Qy
              11 111
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RESULT 44
US-09-758-128-45
; Sequence 45, Application US/09758128
; Patent No. US20020107187A1
; GENERAL INFORMATION:
; APPLICANT: KINGSTON, David J.
  APPLICANT: GERRATY, No. US20020107187A1man L. APPLICANT: WESTBROOK, Simon L.
  TITLE OF INVENTION: MODULATING THE ACTIVITY OF HORMONES OR THEIR RECEPTORS
; TITLE OF INVENTION: - PEPTIDES, ANTIBODIES, VACCINES AND USES THEREOF
; FILE REFERENCE: 016786/0214
  CURRENT APPLICATION NUMBER: US/09/758,128
  CURRENT FILING DATE: 2001-01-12
; PRIOR APPLICATION NUMBER: 09/194,218
  PRIOR FILING DATE: 1999-02-05
  PRIOR APPLICATION NUMBER: AU PN9990
; PRIOR FILING DATE: 1996-05-22
; NUMBER OF SEQ ID NOS: 58
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 45
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US-09-758-128-45
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           3 PLFP 6
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US-09-758-426-45
; Sequence 45, Application US/09758426
; Patent No. US20020169116A1
; GENERAL INFORMATION:
  APPLICANT: KINGSTON, David J.
  APPLICANT: GERRATY, No. US20020169116A1man L.
  APPLICANT: WESTBROOK, Simon L.
  TITLE OF INVENTION: MODULATING THE ACTIVITY OF HORMONES OR THEIR RECEPTORS
  TITLE OF INVENTION: - PEPTIDES, ANTIBODIES, VACCINES AND USES THEREOF
  FILE REFERENCE: 016786/0214
  CURRENT APPLICATION NUMBER: US/09/758,426
  CURRENT FILING DATE: 2001-01-12
  PRIOR APPLICATION NUMBER: 09/194,218
  PRIOR FILING DATE: 1999-02-05
  PRIOR APPLICATION NUMBER: AU PN9990
  PRIOR FILING DATE: 1996-05-22
; NUMBER OF SEQ ID NOS: 58
  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 45
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   TYPE: PRT
   ORGANISM: Homo sapiens
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RESULT 46
US-09-758-198-45
; Sequence 45, Application US/09758198
; Publication No. US20020187925A1
; GENERAL INFORMATION:
  APPLICANT: KINGSTON, David J.
 APPLICANT: GERRATY, No. US20020187925A1man L.
; APPLICANT: WESTBROOK, Simon L.
; TITLE OF INVENTION: MODULATING THE ACTIVITY OF HORMONES OR THEIR RECEPTORS
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TITLE OF INVENTION: - PEPTIDES, ANTIBODIES, VACCINES AND USES THEREOF
  FILE REFERENCE: 016786/0214
  CURRENT APPLICATION NUMBER: US/09/758,198
  CURRENT FILING DATE: 2001-01-12
  PRIOR APPLICATION NUMBER: EARLIER APPLICATION NUMBER: US/09/194,218
  PRIOR FILING DATE: EARLIER FILING DATE: 1999-02-05
  PRIOR APPLICATION NUMBER: EARLIER APPLICATION NUMBER: PCT/AU97/00312
  PRIOR FILING DATE: EARLIER FILING DATE: 1997-05-22
  PRIOR APPLICATION NUMBER: EARLIER APPLICATION NUMBER: AU PN9990
  PRIOR FILING DATE: EARLIER FILING DATE: 1996-05-22
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US-09-758-198-45
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RESULT 47
US-09-861-661-45
; Sequence 45, Application US/09861661
; Publication No. US20030045676A1
; GENERAL INFORMATION:
; APPLICANT: KINGSTON, DAVID J.
; APPLICANT: GERRATY, NORMAN L.
; APPLICANT: WESTBROOK, SIMON L.
  TITLE OF INVENTION: PEPTIDES, ANTIBODIES, VACCINES & USES THEREOF
  FILE REFERENCE: 054270/0135
; CURRENT APPLICATION NUMBER: US/09/861,661
; CURRENT FILING DATE: 2001-05-22
; PRIOR APPLICATION NUMBER: 09/194,218
; PRIOR FILING DATE: 1999-02-05
; PRIOR APPLICATION NUMBER: AU PN9990
; PRIOR FILING DATE: 1996-05-22
; NUMBER OF SEQ ID NOS: 59
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; SEQ ID NO 45
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US-09-861-661-45
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           6 PLFP 9
Qy
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RESULT 48
US-10-253-286-464
; Sequence 464, Application US/10253286
: Publication No. US20040058881A1
; GENERAL INFORMATION:
  APPLICANT: HUMPHREYS, ROBERT
  APPLICANT: XU, MINZHEN
 TITLE OF INVENTION: II-KEY/ANTIGENIC EPITOPE HYBRID PEPTIDE VACCINES
 FILE REFERENCE: REH-2015
  CURRENT APPLICATION NUMBER: US/10/253,286
 CURRENT FILING DATE: 2003-01-13
 PRIOR APPLICATION NUMBER: 10/197,000
 PRIOR FILING DATE: 2002-07-17
 PRIOR APPLICATION NUMBER: 09/396,813
  PRIOR FILING DATE: 1999-09-14
 NUMBER OF SEQ ID NOS: 905
  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 464
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   ORGANISM: Homo sapiens
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Db
RESULT 49
US-10-245-871-464
; Sequence 464, Application US/10245871
; Publication No. US20030235594A1
; GENERAL INFORMATION:
 APPLICANT: HUMPHREYS, ROBERT
  APPLICANT: XU, MINZHEN
  TITLE OF INVENTION: Ii-KEY/ANTIGENIC EPITOPE HYBRID PEPTIDE VACCINES
  FILE REFERENCE: REH-2013
  CURRENT APPLICATION NUMBER: US/10/245,871
  CURRENT FILING DATE: 2003-01-09
  PRIOR APPLICATION NUMBER: 10/197,000
  PRIOR FILING DATE: 2002-07-17
  PRIOR APPLICATION NUMBER: 09/396,813
   PRIOR FILING DATE: 1999-09-14
   NUMBER OF SEQ ID NOS: 905
   SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 464
    LENGTH: 9
    TYPE: PRT
    ORGANISM: Homo sapiens
US-10-245-871-464
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Qу
             11 11
           3 VPFFP 7
Db
RESULT 50
US-10-408-133-16
; Sequence 16, Application US/10408133
; Publication No. US20040018173A1
; GENERAL INFORMATION:
; APPLICANT: Thompson, Timothy C
; APPLICANT: Ren, Chengzen
; TITLE OF INVENTION: Compositions and Methods for the Treatment and Prevention
of Metastatic
; TITLE OF INVENTION: Disorders
; FILE REFERENCE: PRO025/4-4DIVUS/16000
; CURRENT APPLICATION NUMBER: US/10/408,133
; CURRENT FILING DATE: 2003-04-07
; NUMBER OF SEQ ID NOS: 28
  SOFTWARE: PatentIn version 3.1
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;
   TYPE: PRT
   ORGANISM: homo sapiens sapiens
US-10-408-133-16
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  Query Match
  Best Local Similarity 100.0%; Pred. No. 1.2e+06;
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           4; Conservative
  Matches
           6 PLFP 9
Qу
             1111
           6 PLFP 9
Db
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Search completed: July 4, 2004, 05:12:32 Job time: 18.6642 secs

## GenCore version 5.1.6 Copyright (c) 1993 - 2004 Compugen Ltd.

OM protein - protein search, using sw model

Run on: July 4, 2004, 04:33:51; Search time 15.3134 Seconds

(without alignments)

185.436 Million cell updates/sec

Title: US-09-641-802-31

Perfect score: 48

Sequence: 1 VESYVPLFP 9

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 1017041 seqs, 315518202 residues

Total number of hits satisfying chosen parameters: 5664

Minimum DB seq length: 7
Maximum DB seq length: 18

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 100 summaries

Database: SPTREMBL 25:\*

1: sp archea:\*

2: sp\_bacteria:\*

3: sp\_fungi:\*

4: sp\_human:\*

5: sp\_invertebrate:\*

6: sp mammal:\*

7: sp mhc:\*

8: sp organelle:\*

9: sp phage:\*

10: sp\_plant:\*

11: sp\_rodent:\*

12: sp\_virus:\*

13: sp\_vertebrate:\*

14: sp unclassified:\*

15: sp rvirus:\*

16: sp bacteriap:\*

17: sp\_archeap:\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## SUMMARIES

ક

Result Query

No. Score Match Length DB ID Description

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| 2  | 26 | 54.2 | 18 | 5 Q9TWL5  | Q9NS10 nomo sapien<br>Q9twl5 lucilia cup |
| 3  | 25 | 52.1 | 17 | 3 Q9URC6  | Q9tw15 lucilla cup<br>Q9urc6 saccharomyc |
| 4  | 24 | 50.0 | 15 | 2 Q8RKN0  | Q8rkn0 escherichia                       |
| 5  | 24 | 50.0 | 16 | 10 082407 | ***                                      |
| 6  | 24 | 50.0 | 16 | 10 082407 | 082407 fragaria vi                       |
| 7  | 24 | 50.0 | 16 |           | 082404 fragaria ni                       |
|    | 24 | 50.0 | 16 |           | 082406 fragaria mo                       |
| 8  |    |      |    |           | 082402 fragaria nu                       |
| 9  | 24 | 50.0 | 16 |           | 082403 fragaria ve                       |
| 10 | 24 | 50.0 | 16 | 10 082781 | 082781 fragaria ve                       |
| 11 | 24 | 50.0 | 16 | 10 082405 | 082405 fragaria ii                       |
| 12 | 23 | 47.9 | 13 | 8 Q9T2U1  | Q9t2u1 bos taurus                        |
| 13 | 23 | 47.9 | 15 | 2 Q52135  | Q52135 enterococcu                       |
| 14 | 23 | 47.9 | 18 | 4 Q9UCL5  | Q9ucl5 homo sapien                       |
| 15 | 22 | 45.8 | 15 | 10 Q9S8V7 | Q9s8v7 triticum ae                       |
| 16 | 22 | 45.8 | 15 | 12 Q69353 | Q69353 herpes simp                       |
| 17 | 21 | 43.8 | 11 | 8 Q32704  | Q32704 nicotiana t                       |
| 18 | 21 | 43.8 | 12 | 12 Q83139 | Q83139 barley stri                       |
| 19 | 21 | 43.8 | 13 | 13 P82881 | P82881 rana clamit                       |
| 20 | 21 | 43.8 | 16 | 6 Q9BGG8  | Q9bgg8 sorex arane                       |
| 21 | 21 | 43.8 | 16 | 11 054894 | O54894 mus musculu                       |
| 22 | 21 | 43.8 | 17 | 4 Q9HB76  | Q9hb76 homo sapien                       |
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| 24 | 21 | 43.8 | 18 | 10 Q41458 | Q41458 solanum tub                       |
| 25 | 20 | 41.7 | 11 | 2 Q56972  | Q56972 yersinia pe                       |
| 26 | 20 | 41.7 | 15 | 11 088175 | 088175 mus musculu                       |
| 27 | 20 | 41.7 | 16 | 12 Q9WMG6 | Q9wmg6 sigma virus                       |
| 28 | 19 | 39.6 | 9  | 10 Q9S8J8 | Q9s8j8 oryza sativ                       |
| 29 | 19 | 39.6 | 13 | 3 Q96WW8  | Q96ww8 geotrichum                        |
| 30 | 19 | 39.6 | 14 | 4 Q9P2A2  | Q9p2a2 homo sapien                       |
| 31 | 19 | 39.6 | 14 | 11 070599 | 070599 rattus norv                       |
| 32 | 19 | 39.6 | 17 | 4 Q9NY39  | Q9ny39 homo sapien                       |
| 33 | 19 | 39.6 | 17 | 8 Q7YAT7  | Q7yat7 cooperia on                       |
| 34 | 19 | 39.6 | 17 | 8 Q7Y834  | Q7y834 cooperia on                       |
| 35 | 19 | 39.6 | 17 | 11 Q9QVH7 | Q9qvh7 rattus sp.                        |
| 36 | 19 | 39.6 | 18 | 5 Q7YXH4  | Q7yxh4 caenorhabdi                       |
| 37 | 19 | 39.6 | 18 | 17 Q8ZSZ9 | Q8zsz9 pyrobaculum                       |
| 38 | 18 | 37.5 | 9  | 3 Q9P8E5  | Q9p8e5 kluyveromyc                       |
| 39 | 18 | 37.5 | 9  | 12 Q88612 | Q88612 middelburg                        |
| 40 | 18 | 37.5 | 12 | 6 Q9TRY4  | Q9try4 sus sp. ins                       |
| 41 | 18 | 37.5 | 13 | 11 Q63047 | Q63047 rattus norv                       |
| 42 | 18 | 37.5 | 13 | 13 Q9PVA0 | Q9pva0 colisa lali                       |
| 43 | 18 | 37.5 | 13 | 13 Q9PVB1 | Q9pvb1 dendrochiru                       |
| 44 | 18 | 37.5 | 13 | 13 Q9PV95 | Q9pv95 mola mola (                       |
| 45 | 18 | 37.5 | 13 | 13 Q9PVA7 | Q9pva7 dissostichu                       |
| 46 | 18 | 37.5 | 13 | 13 Q9PVB3 | Q9pvb3 hippocampus                       |
| 47 | 18 | 37.5 | 13 | 13 Q9PV98 | Q9pv98 psettodes s                       |
| 48 | 18 | 37.5 | 13 | 13 Q9PV97 | Q9pv97 balistes sp                       |
| 49 | 18 | 37.5 | 13 | 13 Q9PVB2 | Q9pvb2 mastacembel                       |
| 50 | 18 | 37.5 | 13 | 13 Q9PVA2 | Q9pva2 thunnus sp.                       |
| 51 | 18 | 37.5 | 13 | 13 Q9PVB0 | Q9pvb0 dicentrarch                       |
| 52 | 18 | 37.5 | 13 | 13 Q9PVB4 | Q9pvb4 zeus faber                        |
| 53 | 18 | 37.5 | 13 | 13 Q9PV99 | Q9pv99 channa sp.                        |
| 54 | 18 | 37.5 | 13 | 13 Q9PVA5 | Q9pva5 cryptocentr                       |
| 55 | 18 | 37.5 | 13 | 13 Q9PVA3 | Q9pva3 acanthurus                        |
| 56 | 18 | 37.5 | 13 | 13 Q9PVA9 | Q9pva9 epinephelus                       |
| 57 | 18 | 37.5 | 13 | 13 Q9PVC5 | Q9pvc5 galaxias ma                       |
|    |    |      |    |           | _ <del>-</del>                           |

|     | 4.0 |       |     |     |        | - 4                |
|-----|-----|-------|-----|-----|--------|--------------------|
| 58  | 18  | 37.5  | 13  | 13  | Q9PVA4 | Q9pva4 siganus sp. |
| 59  | 18  | 37.5  | 13  | 13  | Q9PVA1 | Q9pva1 stromateus  |
| 60  | 18  | 37.5  |     | .13 | Q9PV96 | Q9pv96 ostracion s |
| 61  | 18  | 37.5  | 13  | 13  | Q9PVB5 | Q9pvb5 sargocentro |
| 62  | 18  | 37.5  | 13  | 13  | Q9PVB7 | Q9pvb7 fundulus he |
| 63  | 18  | 37.5  | 13  | 13  | Q9PVB6 | Q9pvb6 poecilia la |
| 64  | 18  | 37.5  | 13  | 13  | Q9PVA6 | Q9pva6 salarias sp |
| 65  | 18  | 3.7.5 | 13  | 13  | P82866 | P82866 rana pipien |
| 66  | 18  | 37.5  | 14  | 2   | Q8RK22 | Q8rk22 pseudomonas |
| 67  | 18  | 37.5  | 15  | 6   | Q9TR45 | Q9tr45 bos taurus  |
| 68  | 18  | 37.5  | 15  | 6   | Q9TRN8 | Q9trn8 sus scrofa  |
| 69  | 18  | 37.5  | 15  | 8   | Q85XG6 | Q85xg6 clusia arip |
| 70  | 18  | 37.5  | 15  | 8   | Q85XG4 | Q85xg4 clusia croa |
| 71  | 18  | 37.5  | 15  | 8   | Q85XG2 | Q85xg2 clusia flav |
| 72  | 18  | 37.5  | 15  | 8   | Q85XG0 | Q85xg0 clusia flum |
| 73  | 18  | 37.5  | 15  | 8   | Q85XF8 | Q85xf8 clusia gran |
| 74  | 18  | 37.5  | 15  | 8   | Q85XF6 | Q85xf6 clusia inte |
| 75  | 18  | 37.5  | 15  | 8   | Q85XF4 | Q85xf4 clusia lanc |
| 76  | 18  | 37.5  | 15  | 8   | Q85XF2 | Q85xf2 clusia majo |
| 77  | 18  | 37.5  | 15  | 8   | Q85XE9 | Q85xe9 clusia nemo |
| 78  | 18  | 37.5  | 15  | 8   | Q85XE7 | Q85xe7 clusia rose |
| 79  | 18  | 37.5  | 15  | 8   | Q85XE5 | Q85xe5 clusia sten |
| 80  | 18  | 37.5  | 15  | 8   | Q85XE3 | Q85xe3 clusia tocu |
| 81  | 18  | 37.5  | 15  | 8   | Q85XE1 | Q85xel clusia torr |
| 82  | 18  | 37.5  | 15  | 8   | Q85XD9 | Q85xd9 clusia vale |
| 83  | 18  | 37.5  | 15  | 8   | Q85C69 | Q85c69 clusia ducu |
| 84  | 18  | 37.5  | 15  | 8   | Q85C68 | Q85c68 clusia mino |
| 85  | 18  | 37.5  | 15  | 8   | Q85C67 | Q85c67 clusia mult |
| 86  | 18  | 37.5  | 16  | 2   | Q9R963 | Q9r963 helicobacte |
| 87  | 18  | 37.5  | 16  | 8   | 019977 | O19977 gossypium m |
| 88  | 18  | 37.5  | 16  | 8   | 019975 | O19975 gossypium t |
| 89  | 18  | 37.5  | 16  | 8   | 019973 | 019973 gossypium b |
| 90  | 18  | 37.5  | 16  | 8   | 019971 | O19971 gossypium h |
| 91  | 18  | 37.5  | 16  | 11  | Q9CW70 | Q9cw70 mus musculu |
| 92  | 18  | 37.5  | 18  | 2   | Q8L2T5 | Q812t5 neisseria m |
| 93  | 18  | 37.5  | 18  | 3   | Q9UR73 | Q9ur73 trichoderma |
| 94  | 18  | 37.5  | 18  | 8   | 019979 | O19979 gossypium d |
| 95  | 18  | 37.5  | 1.8 | 8   | 019969 | O19969 gossypium a |
| 96  | 18  | 37.5  | 18  | 10  | Q958Y9 | Q9s8y9 poa pratens |
| 97  | 17  | 35.4  | 8   | 8   | Q34909 | Q34909 locusta mig |
| 98  | 17  | 35.4  | 9   | 6   | Q9TRU7 | Q9tru7 bos taurus  |
| 99  | 17  | 35.4  | 10  | 11  | Q8VHM9 | Q8vhm9 mus musculu |
| 100 | 17  | 35.4  | 12  | 10  | P82329 | P82329 pisum sativ |
|     |     |       |     |     |        |                    |

## ALIGNMENTS

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RESULT 1
Q9NSF0
ID
    Q9NSF0
              PRELIMINARY;
                                  PRT;
                                         18 AA.
    Q9NSF0;
    01-OCT-2000 (TrEMBLrel. 15, Created)
DT
    01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
    01-OCT-2000 (TrEMBLrel. 15, Last annotation update)
DT
DE
    MESP1 (Fragment).
OS
    Homo sapiens (Human).
```

```
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
     Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OC
     NCBI TaxID=9606;
OX
RN
     SEQUENCE FROM N.A.
RP
     Carim L., Estivill X., Escarceller M., Sumoy L.;
RA
     Submitted (JUN-2000) to the EMBL/GenBank/DDBJ databases.
RL
RN
     SEQUENCE FROM N.A.
RP
     Auffray C., Ansorge W., Ballabio A., Estivill X., Gibson K.,
RA
     Lehrach H., Poustka A., Lundeberg J.;
     "The European IMAGE consortium for integrated Molecular analysis of
RT
     human gene transcripts.";
RT
     Submitted (JUN-2000) to the EMBL/GenBank/DDBJ databases.
RL
DR
     EMBL; AL357535; CAB93427.1; -.
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                                                  1; Indels
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                                                                              0;
 Matches
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            1 VESYVPLFP 9
Qу
              : | : : : | | |
            1 LETWMPLSP 9
Dh
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ID
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AC
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DT
     01-MAY-2000 (TrEMBLrel. 13, Created)
     01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
DT
DT
     01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
     24 kDa chymotrypsin-like enzyme (Fragment).
DE
     Lucilia cuprina (Greenbottle fly) (Australian sheep blowfly).
OS
OC
     Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
OC
     Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha; Oestroidea;
OC
     Calliphoridae; Lucilia.
OX
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RN
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RP
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RX
     MEDLINE=95219141; PubMed=7704304;
     Casu R.E., Pearson R.D., Jarmey J.M., Cadogan L.C., Riding G.A.,
RA
RA
     "Excretory/secretory chymotrypsin from Lucilia cuprina: purification,
RT
     enzymatic specificity and amino acid sequence deduced from mRNA.";
RT
     Insect Mol. Biol. 3:201-211(1994).
RL
DR
     InterPro; IPR009003; Cys_Ser_trypsin.
SO
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                                  Score 26; DB 5; Length 18;
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                                                                  0; Gaps
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            2 ESYVPLFP 9
Qу
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RESULT 3
09URC6
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                                   PRT;
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TD
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DT
     01-MAY-2000 (TrEMBLrel. 13, Created)
     01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
DT
     01-OCT-2002 (TrEMBLrel. 22, Last annotation update)
DT
     Lipid-binding protein (Fragment).
DΕ
OS
     Saccharomyces cerevisiae (Baker's yeast).
     Eukaryota; Fungi; Ascomycota; Saccharomycotina; Saccharomycetes;
OC
     Saccharomycetales; Saccharomycetaceae; Saccharomyces.
OC
OX
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RN
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RP
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    MEDLINE=91353077; PubMed=1882548;
RX
     Creutz C.E., Snyder S.L., Kambouris N.G.;
RA
     "Calcium-dependent secretory vesicle-binding and lipid-binding
RT
     proteins of Saccharomyces cerevisiae.";
RT
     Yeast 7:229-244(1991).
RL
     NON TER
FT
                   1
                          1
     NON TER
                  17
                         17
FT
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SO
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                                 1; Mismatches
                                                    2; Indels
                                                                  0; Gaps
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            2 ESYVPLF 8
QУ
              : | | | |
Db
            2 QDYVPAF 8
RESULT 4
Q8RKN0
ID
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AC
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DT
     01-JUN-2002 (TrEMBLrel. 21, Created)
     01-JUN-2002 (TrEMBLrel. 21, Last sequence update)
DT
     01-JUN-2002 (TrEMBLrel. 21, Last annotation update)
DT
     Putative transposase ORF1005 (Fragment).
DE
GN
     ORF1005.
OS
     Escherichia coli.
     Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales;
OC
     Enterobacteriaceae; Escherichia.
OX
     NCBI TaxID=562;
RN
     [1]
RP
     SEQUENCE FROM N.A.
RC
     STRAIN=743-D:
     Sabate M., Navarro F., Miro E., Campoy S., Mirelis B., Barbe J.,
RA
RT
     "A novel complex sull-type integron in Escherichia coli carrying the
RT
     bla(CTX-M-9) gene.";
     Submitted (MAR-2002) to the EMBL/GenBank/DDBJ databases.
RL
DR
     EMBL; AY092058; AAM15719.1; -.
```

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NON TER
FT
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     SEQUENCE
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SO
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 Ouery Match
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                                                  1; Indels
                                                                 0; Gaps
                                                                              0;
 Matches
            3; Conservative
            1 VESYVPL 7
Qу
              : | |:|:
Db
            6 IEGYLPV 12
RESULT 5
082407
                 PRELIMINARY;
                                   PRT:
                                           16 AA.
ID
    082407
AC
     082407;
DT
     01-NOV-1998 (TrEMBLrel. 08, Created)
     01-NOV-1998 (TrEMBLrel. 08, Last sequence update)
DT
     01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DT
    Alcohol dehydrogenase (EC 1.1.1.1) (Fragment).
DΕ
GN
    Fragaria viridis (Wild strawberry).
OS
     Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
OC
     Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; rosids;
OC
     eurosids I; Rosales; Rosaceae; Rosoideae; Fragaria.
OC
    NCBI TaxID=64942;
OX
RN
     [1]
     SEQUENCE FROM N.A.
RP
RC
     STRAIN=FRA 341;
    Yu H., Davis T.M.;
RA
     Submitted (APR-1997) to the EMBL/GenBank/DDBJ databases.
RL
    EMBL; AF000220; AAC36547.1; -.
DR
DR
     GO; GO:0004025; F:alcohol dehydrogenase activity, iron-dependent; IEA.
DR
     GO; GO:0004023; F:alcohol dehydrogenase activity, metal ion-i. . .; IEA.
DR
     GO; GO:0004024; F:alcohol dehydrogenase activity, zinc-dependent; IEA.
DR
     GO; GO:0016491; F:oxidoreductase activity; IEA.
KW
    Oxidoreductase.
FT
     NON TER
                  1
                          1
     NON TER
FT
                  16
                         16
     SEQUENCE
                16 AA; 1682 MW; CEF73B5B28A4D817 CRC64;
SQ
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  Matches
                                                   0; Indels
            4; Conservative
                                0; Mismatches
                                                                 0; Gaps
                                                                              0;
Qу
            6 PLFP 9.
              \Pi\Pi\Pi
Db
            4 PLFP 7
RESULT 6
082404
ID
     082404
                 PRELIMINARY;
                                   PRT:
                                           16 AA.
AC
     082404;
     01-NOV-1998 (TrEMBLrel. 08, Created)
DΤ
     01-NOV-1998 (TrEMBLrel. 08, Last sequence update)
DT
     01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DT
```

```
Alcohol dehydrogenase (EC 1.1.1.1) (Fragment).
DE
GN
     Fragaria nilgerrensis.
OS
     Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
OC
OC.
     Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; rosids;
     eurosids I; Rosales; Rosaceae; Rosoideae; Fragaria.
OC
     NCBI TaxID=64941;
ΟX
RN
     [1]
     SEQUENCE FROM N.A.
RP
RC
     STRAIN=Berlin 1;
RA
     Yu H., Davis T.M.;
     Submitted (APR-1997) to the EMBL/GenBank/DDBJ databases.
RL
     EMBL; AF000217; AAC36544.1; -.
     GO; GO:0004025; F:alcohol dehydrogenase activity, iron-dependent; IEA.
DR
     GO; GO:0004023; F:alcohol dehydrogenase activity, metal ion-i. . .; IEA.
DR
     GO; GO:0004024; F:alcohol dehydrogenase activity, zinc-dependent; IEA.
DR
     GO; GO:0016491; F:oxidoreductase activity; IEA.
DR
KW
     Oxidoreductase.
     NON TER
FT
                          1
                  1
     NON TER
                  16
FT
                         16
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 Query Match
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 Best Local Similarity
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                               0; Mismatches
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                                                                  0; Gaps
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Qy
              Db
            4 PLFP 7
RESULT 7
082406
ID
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                 PRELIMINARY;
                                   PRT;
                                           16 AA.
AC
     082406;
DТ
     01-NOV-1998 (TrEMBLrel. 08, Created)
     01-NOV-1998 (TrEMBLrel. 08, Last sequence update)
DT
DT
     01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DE
     Alcohol dehydrogenase (EC 1.1.1.1) (Fragment).
GN
     ADH.
OS
     Fragaria moschata.
OC
     Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
     Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; rosids;
OC
     eurosids I; Rosales; Rosaceae; Rosoideae; Fragaria.
OC.
OX
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RN
     [1].
RP
     SEQUENCE FROM N.A.
RC
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RA
     Yu H., Davis T.M.;
RL
     Submitted (APR-1997) to the EMBL/GenBank/DDBJ databases.
DR
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     GO; GO:0004025; F:alcohol dehydrogenase activity, iron-dependent; IEA.
DR
DR
     GO; GO:0004023; F:alcohol dehydrogenase activity, metal ion-i. . .; IEA.
DR
     GO; GO:0004024; F:alcohol dehydrogenase activity, zinc-dependent; IEA.
DR
     GO; GO:0016491; F:oxidoreductase activity; IEA.
KW
     Oxidoreductase.
FT
     NON TER
                          1
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```
NON TER
FT
                  16
                         16
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SO
 Ouery Match
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                               0; Mismatches
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                                                                  0; Gaps
                                                                              0;
            6 PLFP 9
Qу
              \mathbf{I} \mathbf{I} \mathbf{I} \mathbf{I}
Db
            4 PLFP 7
RESULT 8
082402
ID
    082402
                 PRELIMINARY;
                                   PRT;
                                            16 AA.
AC
    082402;
     01-NOV-1998 (TrEMBLrel. 08, Created)
DT
DT
     01-NOV-1998 (TrEMBLrel. 08, Last sequence update)
DT
     01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DE
     Alcohol dehydrogenase (EC 1.1.1.1) (Fragment).
GN
OS
    Fragaria nubicola.
OC
     Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
     Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; rosids;
OC
OC
     eurosids I; Rosales; Rosaceae; Rosoideae; Fragaria.
OX
    NCBI TaxID=60188;
RN
     [1]
     SEQUENCE FROM N.A.
RP
RC
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RA
     Yu H., Davis T.M.;
     Submitted (APR-1997) to the EMBL/GenBank/DDBJ databases.
RL
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DR
DR
    GO; GO:0004025; F:alcohol dehydrogenase activity, iron-dependent; IEA.
DR
     GO; GO:0004023; F:alcohol dehydrogenase activity, metal ion-i. . .; IEA.
DR
     GO; GO:0004024; F:alcohol dehydrogenase activity, zinc-dependent; IEA.
DR
     GO; GO:0016491; F:oxidoreductase activity; IEA.
KW
    Oxidoreductase.
FT
    NON TER
                   1
                          1
    NON TER
FT
                  16
                         16
SQ
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                                                   0; Indels
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Qу
            6 PLFP 9
              4 PLFP 7
Db
RESULT 9
082403
ΙD
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                                   PRT;
                                           16 AA.
AC
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DT
     01-NOV-1998 (TrEMBLrel. 08, Created)
DT
     01-NOV-1998 (TrEMBLrel. 08, Last sequence update)
     01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DT
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```
Alcohol dehydrogenase (EC 1.1.1.1) (Fragment).
DE
GN
OS
     Fragaria vesca (Woodland strawberry).
OC
     Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
     Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; rosids;
OC
     eurosids I; Rosales; Rosaceae; Rosoideae; Fragaria.
OC
OX
    NCBI TaxID=57918;
RN
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     SEQUENCE FROM N.A.
RP
RC
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    Yu H., Davis T.M.;
     Submitted (APR-1997) to the EMBL/GenBank/DDBJ databases.
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DR
    GO; GO:0004025; F:alcohol dehydrogenase activity, iron-dependent; IEA.
DR
DR
     GO; GO:0004023; F:alcohol dehydrogenase activity, metal ion-i. . .; IEA.
    GO; GO:0004024; F:alcohol dehydrogenase activity, zinc-dependent; IEA.
DR
    GO; GO:0016491; F:oxidoreductase activity; IEA.
DR
    Oxidoreductase.
ΚW
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                          1
FΤ
    NON TER
FT
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              \perp
Db
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AC
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     01-NOV-1998 (TrEMBLrel. 08, Last sequence update)
     01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DТ
    Alcohol dehydrogenase (EC 1.1.1.1) (Aldehyde reductase) (Fragment).
DE
GN
    ADH.
     Fragaria vesca (Woodland strawberry).
OS
OC
     Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
OC
     Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; rosids;
     eurosids I; Rosales; Rosaceae; Rosoideae; Fragaria.
OC
OX
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RP
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     STRAIN=YELLOW WONDER, and BARON SOLEMACHER;
RC
RA
     Yu H., Davis T.M.;
RT
     "Genetic relationships among Fragaria species based on RAPDs and an
     alcohol dehydrogenase (ADH) gene.";
RT
RL
     Genome 0:0-0(1997).
     -!- CATALYTIC ACTIVITY: AN ALCOHOL + NAD(+) = AN ALDEHYDE OR KETONE +
CC
CC
         NADH.
CC
     -!- COFACTOR: ZINC OR IRON.
DR
     EMBL; AF000216; AAC36543.1; -.
     EMBL; AF000214; AAC36541.1; -.
```

```
GO; GO:0004025; F:alcohol dehydrogenase activity, iron-dependent; IEA.
DR
     GO; GO:0004023; F:alcohol dehydrogenase activity, metal ion-i. . .; IEA.
DR
DR
     GO; GO:0004024; F:alcohol dehydrogenase activity, zinc-dependent; IEA.
DR
     GO; GO:0016491; F:oxidoreductase activity; IEA.
KW
     Oxidoreductase.
FT
     NON TER
                   1
                          1
     NON TER
FT
                  16
                         16
SO
     SEQUENCE
                16 AA;
                       1682 MW; CEF73B5B28A4D817 CRC64;
  Query Match
                          50.0%; Score 24; DB 10; Length 16;
  Best Local Similarity
                          100.0%; Pred. No. 7.1e+02;
 Matches
            4; Conservative
                                 0; Mismatches
                                                    0; Indels
                                                                  0;
                                                                      Gaps
            6 PLFP 9
Qу
              IIIII
            4 PLFP 7
Db
RESULT 11
082405
ID
     082405
                 PRELIMINARY;
                                   PRT;
                                           16 AA.
AC
     082405;
     01-NOV-1998 (TrEMBLrel. 08, Created)
DT
     01-NOV-1998 (TrEMBLrel. 08, Last sequence update)
DT
     01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DT
DF.
    Alcohol dehydrogenase (EC 1.1.1.1) (Fragment).
GN
    ADH.
OS
     Fragaria iinumae.
OC
     Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
OC.
     Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; rosids;
OC
     eurosids I; Rosales; Rosaceae; Rosoideae; Fragaria.
OX
     NCBI_TaxID=64939;
RN
     [1]
RP
     SEQUENCE FROM N.A.
RC
     STRAIN=FRA 377;
RA
     Yu H., Davis T.M.;
RL
     Submitted (APR-1997) to the EMBL/GenBank/DDBJ databases.
DR
     EMBL; AF000218; AAC36545.1; -.
DR
     GO; GO:0004025; F:alcohol dehydrogenase activity, iron-dependent; IEA.
DR
     GO; GO:0004023; F:alcohol dehydrogenase activity, metal ion-i. . .; IEA.
DR
     GO; GO:0004024; F:alcohol dehydrogenase activity, zinc-dependent; IEA.
DR
     GO; GO:0016491; F:oxidoreductase activity; IEA.
KW
    Oxidoreductase.
FT
    NON TER
                  1
                          1
FT
    NON TER
                  16
                         16
SQ
     SEQUENCE
               16 AA; 1713 MW; CEF73B5B28A4D952 CRC64;
  Query Match
                          50.0%; Score 24; DB 10; Length 16;
  Best Local Similarity
                          100.0%; Pred. No. 7.1e+02;
 Matches
             4; Conservative
                                 0; Mismatches
                                                                              0:
                                                    0; Indels
                                                                  0; Gaps
            6 PLFP 9
Qу
              \perp
Db
            4 PLFP 7
```

```
O9T2U1
                                    PRT;
                                            13 AA.
     O9T2U1
                 PRELIMINARY;
ID
     Q9T2U1;
AC
DТ
     01-MAY-2000 (TrEMBLrel. 13, Created)
DT
     01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
DΤ
     01-JUN-2002 (TrEMBLrel. 21, Last annotation update)
     NADH: ubiquinone oxidoreductase (Complex I) iron-sulfur protein
DE
     fraction 20 kDa polypeptide peptide T-9 (Fragment).
DE
OS
     Bos taurus (Bovine).
     Mitochondrion.
OG
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
     Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
OC
     Bovidae; Bovinae; Bos.
     NCBI TaxID=9913;
OX
RN
     [1]
RP
     SEQUENCE.
     MEDLINE=92138662; PubMed=1778979;
RX
     Masui R., Wakabayashi S., Matsubara H., Hatefi Y.;
RA
     "The amino acid sequence of the 9 kDa polypeptide and partial amino
RT
     acid sequence of the 20 kDa polypeptide of mitochondrial
RT
     NADH: ubiquinone oxidoreductase.";
RT
     J. Biochem. 110:575-582(1991).
RL
     NON TER
                   1
FT
                          1
     NON TER
                  13
                         13
FT
                13 AA; 1369 MW; 0E61A5EAB35FDB50 CRC64;
     SEQUENCE
SO
                          47.9%; Score 23; DB 8; Length 13;
  Query Match
                                  Pred. No. 9e+02;
  Best Local Similarity
                          55.68;
             5; Conservative
                                 1; Mismatches
                                                   3; Indels
                                                                   0; Gaps
                                                                               0;
  Matches
            1 VESYVPLFP 9
Qу
              1: ||| |
            4 VDIYVPGCP 12
RESULT 13
Q52135
     Q52135
                 PRELIMINARY;
                                    PRT;
                                            15 AA.
TD
AC
     Q52135;
     01-NOV-1996 (TrEMBLrel. 01, Created)
DТ
     01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
DT
     01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DT
DF.
     (From E.faecalis) sex pheromone inhibitor (iAD1) determinant.
OS
     Enterococcus faecalis (Streptococcus faecalis).
OG
     Plasmid pAD1.
OC
     Bacteria; Firmicutes; Lactobacillales; Enterococcaceae; Enterococcus.
OX
     NCBI TaxID=1351;
RN
     [1]
RP
     SEQUENCE FROM N.A.
     MEDLINE=91261999; PubMed=2128961;
RX
RA
     Clewell D.B., Pontius L.T., An F.Y., Ike Y., Suzuki A., Nakayama J.;
     "Nucleotide sequence of the sex pheromone inhibitor (iAD1) determinant
RT
RT
     of Enterococcus faecalis conjugative plasmid pAD1.";
     Plasmid 24:156-161(1990).
RL
RN
     [2]
RP
     SEQUENCE FROM N.A.
RX
     MEDLINE=92250408; PubMed=1315730;
```

```
Pontius L.T., Clewell D.B.;
RA
     "Conjugative transfer of Enterococcus faecalis plasmid pAD1:
RT
     nucleotide sequence and transcriptional fusion analysis of a region
RT
     involved in positive regulation.";
RT
     J. Bacteriol. 174:3152-3160(1992).
RL
     EMBL; M62888; AAA98040.1; -.
DR
     PIR; B41868; B41868.
DR
     GO; GO:0046821; C:extrachromosomal DNA; IEA.
DR
KW
     Plasmid.
                15 AA; 1874 MW;
                                  0D9D07E3079E3559 CRC64;
     SEQUENCE
SQ
                          47.9%;
                                  Score 23; DB 2; Length 15;
  Query Match
                          50.0%; Pred. No. 1.1e+03;
 Best Local Similarity
                                1; Mismatches
                                                                 0;
                                                                     Gaps
                                                                             0;
                                                  3; Indels
 Matches
             4; Conservative
            1 VESYVPLF 8
Qу
             1 1:1 1
            4 VHVYIPRF 11
Db
RESULT 14
Q9UCL5
                                           18 AA.
                 PRELIMINARY;
                                   PRT;
ID
     Q9UCL5
AC
     Q9UCL5;
     01-MAY-2000 (TrEMBLrel. 13, Created)
DT
     01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
DT
     01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DT
     Insulin-like growth factor binding protein 22 kDa form (Fragment).
DE
OS
     Homo sapiens (Human).
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
     Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OC
OX
     NCBI_TaxID=9606;
RN
     [1]
RP
     SEQUENCE.
     MEDLINE=93091816; PubMed=1726837;
RX
     Roghani M., Segovia B., Whitechurch O., Binoux M.;
RA
     "Purification from human cerebrospinal fluid of insulin-like growth
RT
     factor binding proteins (IGFBPs). Isolation of IGFBP-2, an altered
RT
     form of IGFBP-3 and a new IGFBP species.";
RT
     Growth Regul. 1:125-130(1991).
RL
DR
     PIR; A54651; A54651.
SQ
     SEQUENCE 18 AA; 1948 MW; AC3F4170E95081E3 CRC64;
                          47.9%; Score 23; DB 4;
                                                    Length 18;
  Query Match
  Best Local Similarity
                          50.0%; Pred. No. 1.3e+03;
                                                                              0;
  Matches
             4; Conservative
                                 2; Mismatches
                                                  2; Indels
                                                                 0; Gaps
            2 ESYVPLFP 9
Qy
              :1:11
          1 DSFVPXEP 8
Db
RESULT 15
09S8V7
     Q9S8V7
                 PRELIMINARY;
                                   PRT; 15 AA.
ID
AC
     Q9S8V7;
     01-MAY-2000 (TrEMBLrel. 13, Created)
```

```
01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
DT
     01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
DT
     High-molecular-weight glutenin subunit (Fragment).
DΕ
     Triticum aestivum (Wheat).
OS
     Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
OC
     Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; Pooideae;
OC
     Triticeae; Triticum.
OC
     NCBI TaxID=4565;
OX
RN
     [1]
RP
     SEQUENCE.
     MEDLINE=93003354; PubMed=1390908;
RX
     Tao H.P., Adalsteins A.E., Kasarda D.D.;
RA
     "Intermolecular disulfide bonds link specific high-molecular-weight
RT
     glutenin subunits in wheat endosperm.";
RT
     Biochim. Biophys. Acta 1159:13-21(1992).
RL
                15 AA; 1559 MW; CD1A6F573C945AFD CRC64;
SO
     SEQUENCE
                           45.8%; Score 22; DB 10; Length 15;
  Query Match
                           37.5%; Pred. No. 1.7e+03;
  Best Local Similarity
                                                                                0;
                                                                    0; Gaps
             3; Conservative
                                  2; Mismatches
                                                     3; Indels
  Matches
            2 ESYVPLFP 9
Qу
              : | |: |
            8 OGYYPISP 15
Db
RESULT 16
Q69353
                 PRELIMINARY;
                                             15 AA.
                                    PRT:
     Q69353
ID
AC
     Q69353;
     01-NOV-1996 (TrEMBLrel. 01, Created)
DT
     01-NOV-1996 (TrEMBLrel. 01, Last sequence update) 01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
DT
DT
     HSV-2 (333) N terminus of 17.8 kDa protein gene (0.642 mu)
DΕ
DE
     (Fragment).
     Herpes simplex virus (type 2).
OS
     Viruses; dsDNA viruses, no RNA stage; Herpesviridae;
OC
     Alphaherpesvirinae; Simplexvirus.
OC
     NCBI TaxID=10310;
OX
RN
     [1]
RP
     SEQUENCE FROM N.A.
     MEDLINE=85033906; PubMed=6092683;
RX
     Draper K.G., Frink R.J., Devi G.B., Swain M., Galloway D.,
RA
     Wagner E.K.;
RA
     "Herpes simplex virus types 1 and 2 homology in the region between
RT
     0.58 and 0.68 map units.";
RT
     J. Virol. 52:615-623(1984).
RL
     EMBL; K03360; AAA45840.1; -.
DR
FT
     NON TER
                  15
                          15
                 15 AA; 1603 MW;
                                    20B04D60BA4507FE CRC64;
     SEQUENCE
SO
                                   Score 22; DB 12; Length 15;
  Query Match
                           45.88;
  Best Local Similarity
                           57.1%; Pred. No. 1.7e+03;
                                                                                 0;
                                  1; Mismatches
                                                     2; Indels
                                                                    0; Gaps
             4; Conservative
  Matches
             3 SYVPLFP 9
Qу
               : | | | |
```

```
RESULT 17
032704
                                           11 AA.
    Q32704
                 PRELIMINARY;
                                   PRT;
ID
     032704;
AC
     01-NOV-1996 (TrEMBLrel. 01, Created)
DT
     01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
DT
     01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DT
    NdhE protein (Fragment).
DΕ
    Nicotiana tabacum (Common tobacco).
OS
     Chloroplast.
OG
     Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
OC
     Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; asterids;
OC
     lamiids; Solanales; Solanaceae; Nicotiana.
OC
     NCBI TaxID=4097;
OX
RN
     [1]
     SEOUENCE FROM N.A.
RP
     STRAIN=Bright yellow 4; TISSUE=Leaf;
RC
    MEDLINE=88210537; PubMed=3329576;
RX
     Hayashida N., Matsubayashi T., Shinozaki K., Sugiura M., Inoue K.,
RA
     Hivama T.;
RA
     "The gene for the 9kd polypeptide, a possible apoprotein for the iron-
RТ
     sulfur centers A and B of the photosystem I complex in tobacco
RT
RT
     chloroplastDNA.";
     Curr. Genet. 12:247-250(1987).
RT.
DR
     EMBL; X05881; CAA29303.1; -.
     GO; GO:0009507; C:chloroplast; IEA.
DR
KW
     Chloroplast.
FT
     NON TER
     SEQUENCE
                11 AA; 1338 MW; 008165EE304776CB CRC64;
                          43.8%; Score 21; DB 8; Length 11;
  Query Match
                          42.9%; Pred. No. 1.9e+03;
  Best Local Similarity
                                2; Mismatches 2; Indels
                                                                 0; Gaps
                                                                              0;
  Matches
            3; Conservative
            1 VESYVPL 7
Qу
              : || |:
Db
            1 INSYQPI 7
RESULT 18
083139
                 PRELIMINARY;
                                   PRT;
                                           12 AA.
ID
     083139
AC
     083139;
     01-NOV-1996 (TrEMBLrel. 01, Created)
DT
     01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
DT
     01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
DT
     (Strain CV17) genomic RNA-gamma, 5' leader.
DE
     Barley stripe mosaic virus (BSMV).
OS
     Viruses; ssRNA positive-strand viruses, no DNA stage; Hordeivirus.
OC
OX
     NCBI TaxID=12327;
RN
     [1]
     SEQUENCE FROM N.A.
RP
RC
     STRAIN=CV17;
RX
     MEDLINE=91062385; PubMed=2247462;
```

```
Petty I.T., Edwards M.C., Jackson A.O.;
RA
     "Systemic movement of an RNA plant virus determined by a point
RT
     substitution in a 5' leader sequence.";
RT
     Proc. Natl. Acad. Sci. U.S.A. 87:8894-8897(1990).
RL
     EMBL; M38633; AAA75527.1; -.
DR
               12 AA; 1416 MW; 36A281207BC05047 CRC64;
SQ
     SEQUENCE
                          43.8%; Score 21; DB 12; Length 12;
  Query Match
                          60.0%; Pred. No. 2.1e+03;
  Best Local Similarity
                                                                              0;
                                 2; Mismatches
                                                  0; Indels
                                                                  0; Gaps
  Matches
             3; Conservative
            3 SYVPL 7
Qу
              ||:|:
Db
            2 SYMPI 6
RESULT 19
P82881
                 PRELIMINARY;
                                   PRT;
                                           13 AA.
ID
     P82881
AC
     P82881;
     01-MAR-2001 (TrEMBLrel. 16, Created)
DT
     01-MAR-2001 (TrEMBLrel. 16, Last sequence update)
DT
     01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DT
     Temporin-1CB.
DΕ
     Rana clamitans (green frog).
OS
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
     Amphibia; Batrachia; Anura; Neobatrachia; Ranoidea; Ranidae; Rana.
OC
OX
     NCBI TaxID=145282;
RN
     [1]
     SEQUENCE.
RP
RC
     TISSUE=Skin;
     MEDLINE=20283865; PubMed=10822101;
RX
     Halverson T., Basir Y.J., Knoop F.C., Conlon J.M.;
RA
     "Purification and characterization of antimicrobial peptides from the
RT
     skin of the North American green frog Rana clamitans.";
RT
     Peptides 21:469-476(2000).
RL
     -!- FUNCTION: ANTIBACTERIAL ACTIVITY AGAINST GRAM-POSITIVE BACTERIUM
CC
CC
         S.AUREUS.
     -!- SUBCELLULAR LOCATION: SECRETED.
CC
     -!- MASS SPECTROMETRY: MW=1430.0; MW ERR=0.02; METHOD=ELECTROSPRAY.
CC
     -!- SIMILARITY: BELONGS TO THE BREVININ/ESCULENTIN/GAEGURIN/RUGOSIN
CC
CC
         FAMILY.
     GO; GO:0006805; P:xenobiotic metabolism; IEA.
DR
     Antibiotic; Amidation.
KW
FT
     MOD RES
                  13
                         13
                                  AMIDATION.
                13 AA; 1432 MW; C4A71A765A8935BD CRC64;
     SEQUENCE
SO
                          43.8%; Score 21; DB 13; Length 13;
  Query Match
                          60.0%; Pred. No. 2.3e+03;
  Best Local Similarity
                                 2; Mismatches
                                                   0; Indels
                                                                  0; Gaps
                                                                              0;
             3; Conservative
  Matches
            4 YVPLF 8
Qу
              ::|||
            1 FLPLF 5
Db
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```
O9BGG8
                                    PRT;
                                            16 AA.
ID
     Q9BGG8
                 PRELIMINARY;
AC
     Q9BGG8;
DT
     01-JUN-2001 (TrEMBLrel. 17, Created)
DT
     01-JUN-2001 (TrEMBLrel. 17, Last sequence update)
     01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DT
     Thyroid hormone receptor alpha (Fragment).
DE
GN
     THRA1.
     Sorex araneus (Eurasian common shrew) (European shrew).
OS
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
     Mammalia; Eutheria; Insectivora; Soricidae; Soricinae; Sorex.
OX
     NCBI TaxID=42254;
RN
     [1]
     SEQUENCE FROM N.A.
RP
RA
     Larkin D., Serov O., Zhdanova N.;
     "Mapping of five genes from human chromosome 17 to chromosome hn of
RT
     the common shrew (Sorex araneus).";
RT
     Acta Theriol. (Warsz) 45:143-146(2000).
RL
     EMBL; AF314827; AAK13419.1; -.
DR
     GO; GO:0004872; F:receptor activity; IEA.
DR
KW
     Receptor.
     NON TER
FT
                   1
                          1
                16 AA; 1951 MW; 775186E3FE5F52E2 CRC64;
SO
     SEQUENCE
                          43.8%; Score 21; DB 6; Length 16;
  Query Match
                          57.1%; Pred. No. 2.8e+03;
  Best Local Similarity
                                                                               0;
  Matches
             4; Conservative
                                 1; Mismatches
                                                    2; Indels
                                                                   0; Gaps
            2 ESYVPLF 8
Qу
              \mathbf{I}: \mathbf{H}
            1 ELFPPLF 7
Db
RESULT 21
054894
                                            16 AA.
ID
     054894
                 PRELIMINARY;
                                    PRT;
AC
     054894;
DT
     01-JUN-1998 (TrEMBLrel. 06, Created)
DT
     01-JUN-1998 (TrEMBLrel. 06, Last sequence update)
     01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DT
DE
     Putative membrane-associated guanylate kinase 1 (Fragment).
GN
     BAIAP1 OR GUKMI1 OR MAGI-1.
OS
     Mus musculus (Mouse).
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
OC
     Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OX
     NCBI TaxID=10090;
RN
     [1]
     SEQUENCE FROM N.A.
RP
     STRAIN=C57 Black/6 x CBA;
RC
     Dobrosotskaya I., Guy R.K., James G.L.;
RA
     "MAGI-1: A Membrane-Associated Guanylate Kinase with a Unique
RT
     Arrangement of Protein-Protein Interaction Domains.";
RT
     J. Biol. Chem. 0:0-0(1997).
RL
     EMBL; AF027504; AAB91996.1; -.
DR
DR
     MGD; MGI:1203522; Baiap1.
DR
     GO; GO:0016301; F:kinase activity; IEA.
KW
     Kinase.
```

```
NON TER
FT
                   1
SO
     SEQUENCE
               16 AA; 1668 MW; E15005C746D95D6B CRC64;
                          43.8%; Score 21; DB 11; Length 16;
  Best Local Similarity
                          60.0%; Pred. No. 2.8e+03;
                                                1; Indels
 Matches
            3; Conservative
                                1; Mismatches
                                                                 0; Gaps
                                                                             0;
            5 VPLFP 9
Qу
             : | | |
           8 IPSFP 12
Db
RESULT 22
Q9HB76
ID
    Q9HB76
                 PRELIMINARY;
                                   PRT;
                                           17 AA.
AC
     Q9HB76;
DT
     01-MAR-2001 (TrEMBLrel. 16, Created)
DT
     01-MAR-2001 (TrEMBLrel. 16, Last sequence update)
DT
     01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
    Arginine vasopressin (Fragment).
DE
GN
    AVP.
OS
    Homo sapiens (Human).
OC
    Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
    Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OC
OX
    NCBI TaxID=9606;
RN
     [1]
RP
     SEQUENCE FROM N.A.
    Lin M.T., Wang N., Chen Y.C., Fang L., Wu Z.Y., Murong S.X.;
RT
     "A GAG deletion within two consecutive GAG sequences in exon 2 of the
RT
    arginine vasopressin gene in Chinese.";
RL
     Submitted (MAY-2000) to the EMBL/GenBank/DDBJ databases.
DR
    EMBL; AF272848; AAG16747.1; -.
DR
    HSSP; P01180; 1NPO.
FT
    NON TER
                  1.
                         1
    NON TER
                 17
                         17
FT
     SEQUENCE 17 AA; 1923 MW; 7EFD60BD634B6B15 CRC64;
SQ
                          43.8%; Score 21; DB 4; Length 17;
 Query Match
 Best Local Similarity
                          60.0%; Pred. No. 3e+03;
                                2; Mismatches
 Matches
           3; Conservative
                                                  0; Indels
                                                                 0; Gaps
           2 ESYVP 6
Qу
             1:1:1
           9 ENYLP 13
Db
RESULT 23
Q85UU5
    085005
                 PRELIMINARY;
                                   PRT;
                                           18 AA.
ID
AC
     085UU5;
DT
     01-JUN-2003 (TrEMBLrel. 24, Created)
     01-JUN-2003 (TrEMBLrel. 24, Last sequence update)
DT
DT
     01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
DE
    Hypothetical protein ORF51 (Fragment).
OS
    Anthoceros formosae (Hornwort).
OG
    Chloroplast.
OC
    Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Anthocerotophyta;
```

```
Anthocerotales; Anthocerotaceae; Anthoceros.
OC
OX
     NCBI TaxID=48387;
     [1]
RN
     SEQUENCE FROM N.A.
RP
     Kugita M., Yamamoto Y., Fujikawa T., Matsumoto T., Yoshinaga K.;
RA
RT
     "RNA editing in hornwort chloroplasts makes more than half the genes
     functional.";
RT
     Nucleic Acids Res. 31:2417-2423(2003).
RL
RN
     [2]
RP
     SEQUENCE FROM N.A.
     MEDLINE=22415709; PubMed=12527781;
RX
RA
     Kuqita M., Kaneko A., Yamamoto Y., Takeya Y., Matsumoto T.,
RA
     Yoshinaga K.;
     "The complete nucleotide sequence of the hornwort (Anthoceros
RT
     formosae) chloroplast genome: insight into the earliest land plants.";
RT
     Nucleic Acids Res. 31:716-721(2003).
RL
     EMBL; AB087431; BAC55431.1; -.
DR
     GO; GO:0009507; C:chloroplast; IEA.
DR
     Chloroplast; Hypothetical protein.
KW
     NON TER
                  18
                         18
FT
                18 AA; 2213 MW; E1F3C1DFE836D35A CRC64;
     SEOUENCE
SO
                          43.8%; Score 21; DB 8; Length 18;
  Query Match
                          80.0%; Pred. No. 3.2e+03;
  Best Local Similarity
                                 0; Mismatches
                                                   1; Indels
                                                                  0; Gaps
                                                                              0;
  Matches
            4; Conservative
            4 YVPLF 8
Qу
              \perp
           13 YHPLF 17
Db
RESULT 24
041458
ID
                 PRELIMINARY;
                                   PRT:
                                            18 AA.
     Q41458
AC
     041458;
     01-NOV-1996 (TrEMBLrel. 01, Created)
DT
DT
     01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
DT
     01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DE
     HMG-CoA reductase (Fragment).
     Solanum tuberosum (Potato).
OS
     Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
OC
OC
     Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; asterids;
OC
     lamiids; Solanales; Solanaceae; Solanum.
OX
     NCBI TaxID=4113;
RN
RP
     SEQUENCE FROM N.A.
RC
     STRAIN=Kennebec; TISSUE=Anther;
     MEDLINE=95306778; PubMed=7787174;
RX
RA
     Bhattacharyya M.K., Paiva N.L., Dixon R.A., Korth K.L., Stermer B.A.;
RT
     "Features of the hmg 1 subfamily of genes encoding HMG-CoA reductase
RT
     in potato.";
RL
     Plant Mol. Biol. 28:1-15(1995).
DR
     EMBL; L34830; AAC37437.1; -.
DR
     PIR; S56715; S56715.
FT
     NON TER
                  18
                         18
SO
     SEQUENCE
                18 AA; 2181 MW; FD17C510527AA68F CRC64;
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43.8%; Score 21; DB 10; Length 18;
 Query Match
 Best Local Similarity 75.0%; Pred. No. 3.2e+03;
            3; Conservative
                                 1; Mismatches
                                                                 0; Gaps
                                                                              0;
 Matches
                                                  0; Indels
Qу
            6 PLFP 9
              11:1
           10 PLYP 13
Db
RESULT 25
056972
     Q56972
                 PRELIMINARY;
                                   PRT;
                                           11 AA.
ID
AC
     Q56972;
     01-NOV-1996 (TrEMBLrel. 01, Created)
DT
     01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
DT
     01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
\mathbf{DT}
DΕ
    LcrKb protein (Fragment).
    LCRKB.
GN
    Yersinia pestis.
OS
    Plasmid Lcr.
OG
     Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales;
OC
     Enterobacteriaceae; Yersinia.
OC
    NCBI_TaxID=632;
OX
RN
     [1]
     SEQUENCE FROM N.A.
RP
RC
     STRAIN=358;
    MEDLINE=92250432; PubMed=1577700;
RX
     Rimpilaeinen M., Forsberg A., Wolf-Watz H.;
RA
     "A novel protein, LcrQ, involved in the low-calcium response of
RT
     Yersinia pseudotuberculosis shows extensive homology to YopH.";
RT
     J. Bacteriol. 174:3355-3363(1992).
RL
     EMBL; X78303; CAA55113.1; -.
DR
DR
     GO; GO:0046821; C:extrachromosomal DNA; IEA.
KW
     Plasmid.
FT
     NON TER
                  11
                         11
     SEQUENCE
                11 AA; 1377 MW; 0478BFECA1A04B54 CRC64;
SQ
  Query Match
                          41.7%;
                                  Score 20; DB 2; Length 11;
 Best Local Similarity
                          37.5%; Pred. No. 3e+03;
                                                                              0;
 Matches
            3; Conservative
                                3; Mismatches
                                                   2; Indels
                                                                  0; Gaps
Qу
            1 VESYVPLF 8
              :|:|: |
Db
            2 MENYITSF 9
RESULT 26
088175
ΙD
     088175
                 PRELIMINARY;
                               PRT;
                                           15 AA.
AC
     088175;
DT
     01-NOV-1998 (TrEMBLrel. 08, Created)
     01-NOV-1998 (TrEMBLrel. 08, Last sequence update)
DT
DT
     01-OCT-2002 (TrEMBLrel. 22, Last annotation update)
DΕ
     Neural cell adhesion molecule (Fragment).
GN
     NCAM1 OR NCAM.
OS
     Mus musculus (Mouse).
OC
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
```

```
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
OC
    NCBI TaxID=10090;
OX
RN
     [1]
     SEQUENCE FROM N.A.
RP
     STRAIN=Balb-c; TISSUE=Liver;
RC
    MEDLINE=98250618; PubMed=9582442;
RX
     Kawahigashi H., Harada Y., Asano A., Nakamura M.;
RA
     "A cis-acting regulatory element that affects the alternative splicing
RT
     of a muscle-specific exon in the mouse NCAM gene.";
RT
     Biochim. Biophys. Acta 1397:305-315(1998).
RL
     EMBL; AB001873; BAA31274.1; -.
DR
    MGD; MGI:97281; Ncam1.
DR
     NON TER
FT
                  1
     NON TER
                  15
                         15
FT
                15 AA; 1481 MW; 41868EF6117732C2 CRC64;
     SEOUENCE
SQ
                          41.7%; Score 20; DB 11; Length 15;
  Query Match
                          80.0%; Pred. No. 4.2e+03;
  Best Local Similarity
                                                                              0;
                                                                 0; Gaps
            4: Conservative
                               0; Mismatches
                                                 1; Indels
            5 VPLFP 9
Qу
              11111
Db
            9 VPLSP 13
RESULT 27
Q9WMG6
ID
     Q9WMG6
                 PRELIMINARY;
                                   PRT:
                                           16 AA.
AC
     Q9WMG6;
     01-NOV-1999 (TrEMBLrel. 12, Created)
DT
     01-NOV-1999 (TrEMBLrel. 12, Last sequence update)
DT
     01-NOV-1999 (TrEMBLrel. 12, Last annotation update)
DT
DE
     2 protein (Fragment).
GN
     2.
OS
     Sigma virus.
     Viruses; ssRNA negative-strand viruses; Mononegavirales;
OC
     Rhabdoviridae; unclassified Rhabdoviridae.
OC
OX
     NCBI TaxID=11301;
RN
     [1]
RP
     SEQUENCE FROM N.A.
     MEDLINE=93212481; PubMed=8384742;
RX
     Teninges D., Bras F., Dezelee S.;
RA
     "Genome organization of the sigma rhabdovirus: six genes and a gene
RT
RT
     overlap.";
     Virology 193:1018-1023(1993).
RL
     EMBL; $57847; AAD40699.1; -.
DR
     NON TER
FT
                          1
     SEOUENCE
                16 AA; 1904 MW; F96DBC468601967E CRC64;
SQ
                          41.7%;
                                  Score 20; DB 12; Length 16;
  Query Match
                          50.0%; Pred. No. 4.4e+03;
  Best Local Similarity
                                                  2; Indels
                                                                 0; Gaps
                                                                              0;
             3; Conservative
                                 1; Mismatches
            4 YVPLFP 9
Qу
              | |: |
            9 YEPVLP 14
Db
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RESULT 28
Q9S8J8
                                             9 AA.
                                   PRT;
ID
     Q9S8J8
                 PRELIMINARY;
     Q9S8J8;
AC
     01-MAY-2000 (TrEMBLrel. 13, Created)
DT
     01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
DT
     01-OCT-2002 (TrEMBLrel. 22, Last annotation update)
DT
     ORYZATENSIN=BIOACTIVE peptide.
DΕ
     Oryza sativa (Rice).
OS
     Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
OC
     Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;
OC
     Ehrhartoideae; Oryzeae; Oryza.
OC
     NCBI TaxID=4530;
OX
RN
     [1]
RP
     SEQUENCE.
     MEDLINE=95102521; PubMed=7804141;
RX
     Takahashi M., Moriguchi S., Yoshikawa M., Sasaki R.;
RA
     "Isolation and characterization of oryzatensin: a novel bioactive
     peptide with ileum-contracting and immunomodulating activities derived
RT
     from rice albumin.";
RT
     Biochem. Mol. Biol. Int. 33:1151-1158(1994).
RT.
DR
     Gramene; Q9S8J8; -.
                      1093 MW; 0E8C67377B56877B CRC64;
     SEOUENCE 9 AA;
SO
                          39.6%; Score 19; DB 10; Length 9;
  Query Match
                          50.0%; Pred. No. 1e+06;
  Best Local Similarity
                                                    0; Indels
                                                                  0; Gaps
                                                                               0;
                                 2; Mismatches
            2; Conservative
            6 PLFP 9
Qу
              1::1
            3 PMYP 6
Db
RESULT 29
096WW8
     Q96WW8
                 PRELIMINARY;
                                    PRT;
                                            13 AA.
ID
AC
     Q96WW8;
     01-DEC-2001 (TrEMBLrel. 19, Created)
DT
     01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
DT
     01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
DT
DE
     Lipase I (Fragment).
GN
     LIP1.
     Geotrichum candidum (Oospora lactis).
OS
     Eukaryota; Fungi; Ascomycota; Saccharomycotina; Saccharomycetes;
OC
OC
     Saccharomycetales; Dipodascaceae; Galactomyces.
     NCBI TaxID=27317;
OX
RN
     [1]
     SEQUENCE FROM N.A.
RP
     STRAIN=ATCC34614;
RC
     MEDLINE=93380907; PubMed=8370674;
RX
     Nagao T., Shimada Y., Sugihara A., Tominaga Y.;
RA
     "Cloning and sequencing of two chromosomal lipase genes from
RT
     Geotrichum candidum.";
RT
     J. Biochem. 113:776-780(1993).
RL
DR
     EMBL; S65082; AAB28107.1; -.
FT
     NON TER
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13 AA; 1385 MW; 7FFB77B4C851B5BB CRC64;
     SEQUENCE
SQ
 Query Match
                          39.6%; Score 19; DB 3; Length 13;
                                  Pred. No. 5.7e+03;
 Best Local Similarity
                         71.4%;
                                                   2; Indels
           5; Conservative
                                0; Mismatches
                                                                 0; Gaps
                                                                             0;
           2 ESYVPLF 8
Qγ
              +1 + +1
            6 ESDVTLF 12
Db
RESULT 30
Q9P2A2
                                   PRT;
                                           14 AA.
ID
     Q9P2A2
                 PRELIMINARY;
AC
     09P2A2;
     01-OCT-2000 (TrEMBLrel. 15, Created)
DT
     01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
DT
     01-OCT-2000 (TrEMBLrel. 15, Last annotation update)
DT
     Truncated aldo-keto reductase (Fragment).
DΕ
     TRUNCATED AKR.
GN
OS
     Homo sapiens (Human).
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
     Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OC
OX
     NCBI TaxID=9606;
RN
     [1]
RP
     SEQUENCE FROM N.A.
     TISSUE=Liver;
RC
     MEDLINE=20138537; PubMed=10672042;
RX
     Nishizawa M., Nakajima T., Yasuda K., Kanzaki H., Sasaguri Y.,
RA
     Watanabe K., Ito S.;
RA
     "Close kinship of human 20alpha-hydroxysteroid dehydrogenase gene with
RT
     three aldo-keto reductase genes.";
RT
     Genes Cells 5:111-125(2000).
RL
     EMBL; AB037903; BAA92888.1; -.
DR
FT
     NON TER
                 1
                          1
               14 AA; 1632 MW; 47EB1EE28D59A8D7 CRC64;
     SEQUENCE
SQ
                          39.6%; Score 19; DB 4; Length 14;
  Query Match
                          80.0%; Pred. No. 6.1e+03;
  Best Local Similarity
                                0; Mismatches 1; Indels
                                                                 0; Gaps
                                                                             0;
  Matches
            4; Conservative
            5 VPLFP 9
QУ
              5 VPLOP 9
Db
RESULT 31
070599
                                           14 AA.
ID
     070599
                 PRELIMINARY;
                                   PRT:
     070599;
AC
     01-AUG-1998 (TrEMBLrel. 07, Created)
DT
     01-AUG-1998 (TrEMBLrel. 07, Last sequence update)
DT
     01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DT
     Thymidine kinase (EC 2.7.1.21) (Fragment).
DE
OS
     Rattus norvegicus (Rat).
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
     Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
OC
```

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NCBI TaxID=10116;
OX
RN
     [1]
     SEQUENCE FROM N.A.
RP
RC
     STRAIN=Sprague-Dawley;
RA
     Sauer M.;
     Thesis (1999), University of Vienna, Inst. of Molecular Biology.
RL
     EMBL; AJ006455; CAA07030.1; -.
DR
     GO; GO:0016301; F:kinase activity; IEA.
DR
     GO; GO:0004797; F:thymidine kinase activity; IEA.
DR
     GO; GO:0016740; F:transferase activity; IEA.
DR
     Kinase; Transferase.
ΚW
FT
     NON TER
                  14
                         14
     SEQUENCE
                14 AA; 1579 MW; 294979C45CB2E8B7 CRC64;
SO
                          39.6%; Score 19; DB 11; Length 14;
  Query Match
                          60.0%; Pred. No. 6.1e+03;
  Best Local Similarity
                                 1; Mismatches
                                                   1; Indels
                                                                  0; Gaps
 Matches
             3; Conservative
            5 VPLFP 9
Qγ
              :1 11
Db
           10 LPSFP 14
RESULT 32
O9NY39
                 PRELIMINARY;
                                   PRT:
                                           17 AA.
     Q9NY39
ID
AC
     Q9NY39;
     01-OCT-2000 (TrEMBLrel. 15, Created)
DT
     01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
     01-OCT-2000 (TrEMBLrel. 15, Last annotation update)
DT
DE
     CHI3L1 protein (Fragment).
GN
     CHI3L1.
     Homo sapiens (Human).
OS
OC
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
     Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
     NCBI TaxID=9606;
OX
ŔŇ
     [1]
RP
     SEQUENCE FROM N.A.
     Ammon C., Rehli M., Andreesen R., Krause S.W.;
RA
     "Alternative splicing of the human cartilage gp-39 gene generates
RT
     multiple mRNA transcripts encoding for at least four putative protein
RT
RT
     isoforms with distinct carboxyl termini.";
     Submitted (DEC-1999) to the EMBL/GenBank/DDBJ databases.
RL
DR
     EMBL; AJ251847; CAB76474.1; -.
FT
     NON TER
                   1
SQ
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                17 AA; 2099 MW; 086B9AA863393785 CRC64;
  Query Match
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                                  Score 19; DB 4; Length 17;
                                 Pred. No. 7.5e+03;
  Best Local Similarity
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                                                                  0; Gaps
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QУ
              ::| |
Db
           10 FIPTLP 15
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Q7YAT7
                                    PRT;
                                            17 AA.
ID
     Q7YAT7
                 PRELIMINARY;
AC
     Q7YAT7;
DT
     01-OCT-2003 (TrEMBLrel. 25, Created)
     01-OCT-2003 (TrEMBLrel. 25, Last sequence update)
DT
     01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
DT
DE
     ATP6 (Fragment).
GN
     ATP6.
os
     Cooperia oncophora.
     Mitochondrion.
OG
     Eukaryota; Metazoa; Nematoda; Chromadorea; Rhabditida; Strongylida;
OC
     Trichostrongyloidea; Cooperiidae; Cooperia.
OC
OX
     NCBI TaxID=27828;
RN
     [1]
RP
     SEQUENCE FROM N.A.
     van der Veer M., de Vries E.;
RA
     "SNP analysis of two populations of the parasitic nematode Cooperia
RT
     oncophora.";
RT
     Submitted (MAY-2003) to the EMBL/GenBank/DDBJ databases.
RL
DR
     EMBL; AY291776; AAP45607.1; -.
KW
     Mitochondrion.
     NON TER
FT
                          1
     SEQUENCE
                17 AA; 2155 MW; 0E2E1EBF3400CB58 CRC64;
SO
                          39.6%; Score 19; DB 8; Length 17;
  Query Match
  Best Local Similarity
                          40.0%;
                                  Pred. No. 7.5e+03;
  Matches
             2; Conservative
                                 3; Mismatches
                                                    0; Indels
                                                                   0; Gaps
                                                                               0;
Qу
            1 VESYV 5
              ::||:
            2 IQSYI 6
Db
RESULT 34
Q7Y834
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                                    PRT;
ID
AC
     Q7Y834;
DT
     01-OCT-2003 (TrEMBLrel. 25, Created)
     01-OCT-2003 (TrEMBLrel. 25, Last sequence update)
DT
     01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
DT
DE
     ATP6 (Fragment).
GN
     ATP6.
OS
     Cooperia oncophora.
OG
     Mitochondrion.
OC
     Eukaryota; Metazoa; Nematoda; Chromadorea; Rhabditida; Strongylida;
OC
     Trichostrongyloidea; Cooperiidae; Cooperia.
OX
     NCBI TaxID=27828;
RN
     [1]
RP
     SEQUENCE FROM N.A.
RA
     van der Veer M., de Vries E.;
     "SNP analysis of two populations of the parasitic nematode Cooperia
RT
RT
     oncophora.";
     Submitted (MAY-2003) to the EMBL/GenBank/DDBJ databases.
RL
     EMBL; AY291699; AAP45527.1; -.
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DR
     EMBL; AY291702; AAP45530.1; -.
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DR
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DR
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     EMBL; AY291719; AAP45547.1; -.
DR
     EMBL; AY291720; AAP45548.1; -.
DR
     EMBL; AY291721; AAP45549.1; -.
DR
     EMBL; AY291722; AAP45550.1; -.
DR
     EMBL; AY291723; AAP45551.1; -.
DR
     EMBL; AY291724; AAP45552.1; -.
DR
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DR
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DR
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DR
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DR
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     EMBL; AY291742; AAP45570.1; -.
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     EMBL; AY291744; AAP45572.1; -.
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     EMBL; AY291746; AAP45574.1; -.
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     EMBL; AY291747; AAP45575.1; -.
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DR
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     EMBL; AY291750; AAP45581.1; -.
DR
DR
     EMBL; AY291751; AAP45582.1; -.
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     EMBL; AY291753; AAP45584.1; -.
DR
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DR
     EMBL; AY291757; AAP45588.1; -.
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     EMBL; AY291758; AAP45589.1; -.
DR
     EMBL; AY291759; AAP45590.1; -.
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DR
     EMBL; AY291773; AAP45604.1; -.
DR
DR
     EMBL; AY291774; AAP45605.1; -.
     EMBL; AY291775; AAP45606.1; -.
DR
     EMBL; AY291777; AAP45608.1; -.
DR
     EMBL; AY291778; AAP45609.1; -.
DR
     EMBL; AY291779; AAP45610.1; -.
DR
     EMBL; AY291780; AAP45611.1; -.
DR
     EMBL; AY291781; AAP45612.1; -.
DR
     EMBL; AY291782; AAP45613.1; -.
DR
     EMBL; AY291783; AAP45614.1; -.
DR
     EMBL; AY291784; AAP45615.1; -.
DR
     EMBL; AY291785; AAP45616.1; -.
DR
     EMBL; AY291786; AAP45617.1; -.
DR
     EMBL; AY291787; AAP45618.1; -.
DR
DR
     EMBL; AY291788; AAP45619.1; -.
DR
     EMBL; AY291789; AAP45620.1; -.
     EMBL; AY291790; AAP45621.1; -.
DR
     EMBL; AY291791; AAP45622.1; -.
DR
DR
     EMBL; AY291792; AAP45623.1; -.
     EMBL; AY291793; AAP45624.1; -.
DR
DR
     EMBL; AY291794; AAP45625.1; -.
DR
     EMBL; AY291795; AAP45626.1; -.
DR
     EMBL; AY291796; AAP45627.1; -.
     EMBL; AY291797; AAP45628.1; -.
DR
     EMBL; AY291798; AAP45629.1; -.
DR
     Mitochondrion.
KW
     NON TER
FT
                   1
                          1
SQ
     SEQUENCE
                17 AA; 2183 MW;
                                   0E3FEEBF3400CB58 CRC64;
  Query Match
                          39.6%;
                                  Score 19; DB 8; Length 17;
                          40.0%;
                                   Pred. No. 7.5e+03;
  Best Local Similarity
             2; Conservative
                                 3; Mismatches
                                                 0; Indels
                                                                   0;
                                                                       Gaps
                                                                               0;
            1 VESYV 5
Qу
              ::|:
            2 IQSYI 6
RESULT 35
090VH7
                                            17 AA.
ID
     Q9QVH7
                 PRELIMINARY;
                                    PRT;
AC
     Q9QVH7;
DT
     01-MAY-2000 (TrEMBLrel. 13, Created)
DT
     01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
```

```
01-JUN-2002 (TrEMBLrel. 21, Last annotation update)
DΤ
    Alpha-2-macroglobulin (Fragment).
DE
    Rattus sp.
OS
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
    Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
OC
    NCBI TaxID=10118;
OX
RN
     [1]
RP
     SEQUENCE.
    MEDLINE=92041742; PubMed=1718949;
RX
     Enjyoji K., Miyazaki K., Kato H.;
RA
     "Characterization of rat factors X and Xa: demonstration of factor Xa
RT
     in rat plasma.";
RT
     J. Biochem. 109:890-898(1991).
RL
FT
    NON TER
                  1
                         1
    NON TER
                  17
                         17
FT
                                  7E40E70214EF8202 CRC64;
     SEQUENCE
                17 AA: 1834 MW;
SO
                                  Score 19; DB 11; Length 17;
                          39.6%;
  Query Match
                                  Pred. No. 7.5e+03;
  Best Local Similarity
                          66.7%;
                                 0; Mismatches
                                                                              0;
                                                  2; Indels
                                                                  0; Gaps
             4; Conservative
  Matches
            4 YVPLFP 9
Qy
              11 1 1
Db
            7 YVVLVP 12
RESULT 36
o7yxH4
                 PRELIMINARY;
                                   PRT;
                                           18 AA.
ID
     Q7YXH4
AC
     Q7YXH4;
     01-OCT-2003 (TrEMBLrel. 25, Created)
     01-OCT-2003 (TrEMBLrel. 25, Last sequence update)
DT
     01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
DT
     Neuropeptide-like protein 16, isoform b.
DE
GN
     NLP-16.
     Caenorhabditis elegans.
OS
     Eukaryota; Metazoa; Nematoda; Chromadorea; Rhabditida; Rhabditoidea;
OC
     Rhabditidae; Peloderinae; Caenorhabditis.
OC
OX
     NCBI TaxID=6239;
RN
     [1]
RP
     SEQUENCE FROM N.A.
RC
     STRAIN=Bristol N2;
     MEDLINE=99069613; PubMed=9851916;
RX
RA
     "Genome sequence of the nematode C. elegans: a platform for
RT
     investigating biology. The C. elegans Sequencing Consortium.";
RT
     Science 282:2012-2018(1998).
RL
RN
     [2]
RP
     SEQUENCE FROM N.A.
     STRAIN=Bristol N2;
RC
     Nelson J.;
     "The sequence of C. elegans cosmid T13A10.";
RT
     Submitted (MAY-1996) to the EMBL/GenBank/DDBJ databases.
RL
RN
     SEQUENCE FROM N.A.
RP
RC
     STRAIN=Bristol N2;
     Waterston R.;
RA
```

```
Submitted (MAY-2003) to the EMBL/GenBank/DDBJ databases.
RL
RN
     [4]
     SEQUENCE FROM N.A.
RP
     STRAIN=Bristol N2;
RC
    Wilson R.;
RA
     Submitted (JUL-2003) to the EMBL/GenBank/DDBJ databases.
RL.
     EMBL; U56963; AAQ01524.1; -.
DR
KW
    Neuropeptide.
     SEQUENCE
              18 AA; 2047 MW; A1176979A6CFF773 CRC64;
SO
                         39.6%; Score 19; DB 5; Length 18;
  Query Match
  Best Local Similarity
                         60.0%; Pred. No. 8e+03;
                              1; Mismatches
                                                  1; Indels
                                                                 0; Gaps
                                                                             0;
 Matches
            3; Conservative
            5 VPLFP 9
Qу
             : | | |
           1 MPSFP 5
Db
RESULT 37
Q8ZSZ9
                                  PRT:
                                          18 AA.
                PRELIMINARY;
ID
     Q8ZSZ9
AC
     O8ZSZ9;
     01-MAR-2002 (TrEMBLrel. 20, Created)
DТ
     01-MAR-2002 (TrEMBLrel. 20, Last sequence update)
DΤ
     01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DT
     Hypothetical protein PAE3501a.
DE
GN
     PAE3501A.
     Pyrobaculum aerophilum.
OS
     Archaea; Crenarchaeota; Thermoprotei; Thermoproteales;
OC
OC
     Thermoproteaceae; Pyrobaculum.
OX
     NCBI_TaxID=13773;
RN
     [1]
RP
     SEQUENCE FROM N.A.
RC
     STRAIN=IM2 / ATCC 51768 / DSM 7523;
RX
     MEDLINE=21664397; PubMed=11792869;
RA
     Fitz-Gibbon S.T., Ladner H., Kim U.-J., Stetter K.O., Simon M.I.,
RA
     Miller J.H.;
RT
     "Genome sequence of the hyperthermophilic crenarchaeon Pyrobaculum
RT
     aerophilum.";
     Proc. Natl. Acad. Sci. U.S.A. 99:984-989(2002).
RL
DR
     EMBL; AE009934; AAL64964.1; -.
KW
     Hypothetical protein; Complete proteome.
     SEQUENCE 18 AA; 2262 MW; BCFF4D6923A98943 CRC64;
SQ
  Query Match
                          39.6%; Score 19; DB 17; Length 18;
  Best Local Similarity 75.0%; Pred. No. 8e+03;
                              1; Mismatches
                                                  0; Indels
                                                                 0; Gaps
                                                                             0;
  Matches
           3; Conservative
            2 ESYV 5
Qу
              |||:
            3 ESYI 6
Db
RESULT 38
Q9P8E5
     Q9P8E5
                PRELIMINARY; PRT;
                                            9 AA.
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AC
    09P8E5;
     01-OCT-2000 (TrEMBLrel. 15, Created)
DT
     01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
DT
     01-MAR-2001 (TrEMBLrel. 16, Last annotation update)
DT
DE
     HIS4 protein (Fragment).
GN
    HIS4.
     Kluyveromyces lactis (Yeast).
OS
OC
     Eukaryota; Fungi; Ascomycota; Saccharomycotina; Saccharomycetes;
OC
     Saccharomycetales; Saccharomycetaceae; Kluyveromyces.
OX
    NCBI TaxID=28985;
RN
     [1]
RP
     SEQUENCE FROM N.A.
RC
     STRAIN=NRRL-Y1140;
RX
    MEDLINE=99448382; PubMed=10518937;
     Lamas-Maceiras M., Esperanza Cerdan E., Freire-Picos M.A.;
RA
     "Kluyveromyces lacxtis HIS4 transcriptional regulation: similarities
RT
RT
     and differences to Saccharomyces cerevisiae HIS4 gene.";
RL
     FEBS Lett. 458:72-76(1999).
     EMBL; AJ238494; CAB87125.1; -.
DR
\mathbf{FT}
     NON TER
                9
                          9
                9 AA; 1015 MW; 5770D2D772D2D767 CRC64;
     SEQUENCE
SQ
                          37.5%; Score 18; DB 3;
                                                    Length 9;
  Query Match
                          75.0%; Pred. No. 1e+06;
  Best Local Similarity
             3; Conservative
                                 1; Mismatches
                                                   0; Indels
                                                                  0; Gaps
            5 VPLF 8
Qу
              ||:|
            5 VPVF 8
Db
RESULT 39
Q88612
ID
     088612
                 PRELIMINARY;
                                   PRT;
                                             9 AA.
AC
     Q88612;
DT
     01-NOV-1996 (TrEMBLrel. 01, Created)
DT
     01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
DT
     01-NOV-1998 (TrEMBLrel. 08, Last annotation update)
     Structural polyprotein (Fragment).
DE
OS
    Middelburg virus.
     Viruses; ssRNA positive-strand viruses, no DNA stage; Togaviridae;
OC
OC
     Alphavirus.
OX
     NCBI_TaxID=11023;
RN
     [1]
RP
     SEQUENCE FROM N.A.
RX
     MEDLINE=83039346; PubMed=6291034;
     Ou J.H., Rice C.M., Dalgarno L., Strauss E.G., Strauss J.H.;
RA
RT
     "Sequence studies of several alphavirus genomic RNAs in the region
     containing the start of the subgenomic RNA.";
RT
     Proc. Natl. Acad. Sci. U.S.A. 79:5235-5239(1982).
RL
DR
     EMBL; J02246; AAA96655.1; -.
KW
     Polyprotein.
FT
     NON TER
SO
     SEQUENCE
                9 AA; 1114 MW; 00E8B6C1B7604B54 CRC64;
  Query Match
                          37.5%; Score 18; DB 12; Length 9;
  Best Local Similarity
                          50.0%; Pred. No. 1e+06;
```

```
2; Conservative
                                                    0; Indels
                                                                  0; Gaps
                                                                               0;
 Matches
                                 2; Mismatches
            3 SYVP 6
Qy
              : | : |
Db
            2 NYIP 5
RESULT 40
O9TRY4
     Q9TRY4
                 PRELIMINARY;
                                   PRT;
                                            12 AA.
ID
AC
     Q9TRY4;
DT
     01-MAY-2000 (TrEMBLrel. 13, Created)
DT
     01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
DT
     01-JUN-2002 (TrEMBLrel. 21, Last annotation update)
     Insulin-like growth factor-binding protein-6, IGFBP-6 (Fragment).
DE
OS
     Sus sp.
OC
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
     Mammalia; Eutheria; Cetartiodactyla; Suina; Suidae; Sus.
OC
     NCBI TaxID=9826;
OX
RN
     [1]
RP
     SEQUENCE.
     MEDLINE=92049376; PubMed=1719383;
RX
     Shimasaki S., Gao L., Shimonaka M., Ling N.;
RA
     "Isolation and molecular cloning of insulin-like growth factor-binding
RT
RT
     protein-6.";
     Mol. Endocrinol. 5:938-948(1991).
RL
     NON TER
FT
                  1
                          1
     NON TER
                  12
                         12
FT
SQ
     SEQUENCE
                12 AA; 1317 MW; 4DAAABE6CC72DB57 CRC64;
                          37.5%; Score 18; DB 6; Length 12;
  Query Match
 Best Local Similarity 100.0%; Pred. No. 8.2e+03;
 Matches
             3; Conservative
                                 0; Mismatches
                                                    0; Indels
                                                                  0; Gaps
                                                                               0;
Qу
            4 YVP 6
              | | | |
Db
            6 YVP 8
RESULT 41
Q63047
ID
     Q63047
                 PRELIMINARY;
                                   PRT;
                                            13 AA.
     Q63047;
AC
DT
     01-NOV-1996 (TrEMBLrel. 01, Created)
DT
     01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
DT
     01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DE
     AMP deaminase (Fragment).
GN
     AMPD1.
OS
     Rattus norvegicus (Rat).
OC
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
     Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
OX
    NCBI TaxID=10116;
RN
     [1]
RP
     SEQUENCE FROM N.A.
RC
     STRAIN=Sprague-Dawley; TISSUE=Soleus muscle;
     MEDLINE=90377216; PubMed=2398891;
RX
RA
     Mineo I., Clarke P.R.H., Sabina R.L., Holmes E.W.;
```

```
"A novel pathway for alternative splicing: Identification of an RNA
RT
    intermediate that generates an alternative 5' splice donor site not
RT
    present in the primary transcript of AMPD1.";
RT
    Mol. Cell. Biol. 10:5271-5278(1990).
RL
DR
    EMBL; M58689; AAA40727.1; -.
DR
    PIR; I77387; I77387.
    NON TER
FT
                  13
                         13
                13 AA; 1524 MW; 526C5A93EF6201A7 CRC64;
SQ
    SEQUENCE
                          37.5%;
                                  Score 18; DB 11; Length 13;
 Query Match
                          75.0%; Pred. No. 8.9e+03;
 Best Local Similarity
                                                                              0;
            3; Conservative
                                 1; Mismatches
                                                   0; Indels
                                                                  0;
                                                                      Gaps
            5 VPLF 8
Qу
              : 111
            1 MPLF 4
RESULT 42
O9PVA0
    Q9PVA0
                                   PRT;
                                           13 AA.
                 PRELIMINARY;
ID
AC
    Q9PVA0;
     01-MAY-2000 (TrEMBLrel. 13, Created)
DT
     01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
DT
     01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DT
     Growth hormone (Fragment).
DE
GN
    GH.
     Colisa lalia (dwarf gourami).
OS
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
    Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei;
OC
    Acanthomorpha; Acanthopterygii; Percomorpha; Perciformes;
OC
OC
     Anabantoidei; Belontiidae; Colisa.
OX
     NCBI TaxID=50373;
RN
     [1]
RP
     SEQUENCE FROM N.A.
RC
     STRAIN=Gh4aGouramy;
RX
    MEDLINE=99398697; PubMed=10468597;
RA
     Venkatesh B., Ning Y., Brenner S.;
RT
     "Late changes in spliceosomal introns define clades in vertebrate
RT
     evolution.";
     Proc. Natl. Acad. Sci. U.S.A. 96:10267-10271(1999).
RL
DR
     EMBL; AF134625; AAD54110.1; -.
DR
     GO; GO:0005576; C:extracellular; IEA.
DR
     GO; GO:0005179; F:hormone activity; IEA.
DR
     InterPro; IPR001400; Somatotropin.
DR
     Pfam; PF00103; hormone; 1.
FT
     NON TER
                   1
                          1
     NON TER
                         13
FT
                  13
SQ
     SEQUENCE
                13 AA; 1642 MW; AA37BE5A8E4C31E6 CRC64;
  Query Match
                          37.5%;
                                  Score 18; DB 13; Length 13;
                          60.0%; Pred. No. 8.9e+03;
  Best Local Similarity
                                 2; Mismatches
                                                                              0;
  Matches
             3; Conservative
                                                    0; Indels
                                                                  0; Gaps
            1 VESYV 5
Qу
              11:1:
Db
            9 VETYL 13
```

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RESULT 43
O9PVB1
                 PRELIMINARY;
                                    PRT;
                                             13 AA.
ID
     Q9PVB1
AC
     Q9PVB1;
     01-MAY-2000 (TrEMBLrel. 13, Created)
DΤ
     01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
DT
     01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DT
     Growth hormone (Fragment).
DE
GN
     Dendrochirus zebra (Zebra turkeyfish).
OS
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
     Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei;
OC
     Acanthomorpha; Acanthopterygii; Percomorpha; Scorpaeniformes;
OC
     Scorpaenoidei; Scorpaenidae; Dendrochirus.
OC
     NCBI TaxID=94308;
OX
     [1]
RN
     SEQUENCE FROM N.A.
RP
     STRAIN=Gh4alionfish:
RC
     MEDLINE=99398697; PubMed=10468597;
RX
     Venkatesh B., Ning Y., Brenner S.;
RA
     "Late changes in spliceosomal introns define clades in vertebrate
RT
     evolution.";
RT
     Proc. Natl. Acad. Sci. U.S.A. 96:10267-10271(1999).
RL
     EMBL; AF134614; AAD54099.1; -.
DR
     GO; GO:0005576; C:extracellular; IEA.
DR
     GO; GO:0005179; F:hormone activity; IEA.
DR
     InterPro; IPR001400; Somatotropin.
DR
     Pfam; PF00103; hormone; 1.
DR
     NON TER
                   1
                          1
FT
FT
     NON TER
                   13
                          13
     SEOUENCE
                 13 AA; 1642 MW; AA37BE5A8E4C31E6 CRC64;
SQ
                           37.5%;
                                   Score 18; DB 13; Length 13;
  Query Match
                           60.0%; Pred. No. 8.9e+03;
  Best Local Similarity
                                                                                 0;
             3; Conservative
                                  2; Mismatches
                                                      0; Indels
                                                                     0; Gaps
  Matches
            1 VESYV 5
Qу
               11:1:
            9 VETYL 13
Db
RESULT 44
09PV95
                  PRELIMINARY;
                                     PRT;
                                             13 AA.
     Q9PV95
ID
AC
     Q9PV95;
     01-MAY-2000 (TrEMBLrel. 13, Created)
DT
     01-MAY-2000 (TrEMBLrel. 13, Last sequence update) 01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DT
DT
     Growth hormone (Fragment).
DE
GN
     GH.
     Mola mola (ocean sunfish).
OS
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
     Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei;
OC
     Acanthomorpha; Acanthopterygii; Percomorpha; Tetraodontiformes;
OC
OC
     Molidae; Mola.
```

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NCBI TaxID=94237;
OX
RN
     [1]
     SEQUENCE FROM N.A.
RP
RC
     STRAIN=Gh4aSunfish;
    MEDLINE=99398697; PubMed=10468597;
RX
     Venkatesh B., Ning Y., Brenner S.;
RA
     "Late changes in spliceosomal introns define clades in vertebrate
RT
     evolution.";
RT
     Proc. Natl. Acad. Sci. U.S.A. 96:10267-10271(1999).
RL
     EMBL; AF134630; AAD54115.1; -.
DR
     GO; GO:0005576; C:extracellular; IEA.
DR
     GO; GO:0005179; F:hormone activity; IEA.
DR
     InterPro; IPR001400; Somatotropin.
DR
     Pfam; PF00103; hormone; 1.
DR
FT
     NON TER
                   1
     NON TER
                  13
                         13
FT
                13 AA; 1642 MW; AA37BE5A8E4C31E6 CRC64;
     SEQUENCE
SQ
                          37.5%; Score 18; DB 13; Length 13;
  Query Match
  Best Local Similarity
                          60.0%; Pred. No. 8.9e+03;
                                                                               0;
                                2; Mismatches
                                                 0; Indels
                                                                  0; Gaps
            3; Conservative
  Matches
            1 VESYV 5
Qу
              11:1:
Db
            9 VETYL 13
RESULT 45
Q9PVA7
                 PRELIMINARY;
                                   PRT:
                                           13 AA.
ID
     Q9PVA7
AC
     Q9PVA7;
     01-MAY-2000 (TrEMBLrel. 13, Created)
DΤ
     01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
DT
DT
     01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
     Growth hormone (Fragment).
DΕ
GN
     Dissostichus mawsoni (Antarctic cod).
OS
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
     Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei;
OC
     Acanthomorpha; Acanthopterygii; Percomorpha; Perciformes;
OC
OC
     Notothenioidei; Nototheniidae; Dissostichus.
OX
     NCBI TaxID=36200;
RN
     [1]
     SEQUENCE FROM N.A.
RP
RC
     STRAIN=Gh4atooth;
RX
     MEDLINE=99398697; PubMed=10468597;
     Venkatesh B., Ning Y., Brenner S.;
RA
     "Late changes in spliceosomal introns define clades in vertebrate
RT
RT
     evolution.";
     Proc. Natl. Acad. Sci. U.S.A. 96:10267-10271(1999).
RL
DR
     EMBL; AF134618; AAD54103.1; -.
     GO; GO:0005576; C:extracellular; IEA.
DR
     GO; GO:0005179; F:hormone activity; IEA.
DR
     InterPro; IPR001400; Somatotropin.
DR
DR
     Pfam; PF00103; hormone; 1.
FT
     NON TER
                   1
                          1
FT
     NON TER
                  13
                          13
```

```
SEOUENCE
SO
                13 AA; 1642 MW; AA37BE5A8E4C31E6 CRC64;
 Query Match
                          37.5%;
                                  Score 18; DB 13; Length 13;
 Best Local Similarity
                          60.0%; Pred. No. 8.9e+03;
                                                                               0;
             3; Conservative
                                 2; Mismatches
                                                    0;
                                                       Indels
                                                                  0; Gaps
            1 VESYV 5
Qу
              ||:|:
            9 VETYL 13
Db
RESULT 46
O9PVB3
                                   PRT;
                                            13 AA.
ID
                 PRELIMINARY;
    Q9PVB3
AC
    Q9PVB3;
DT
     01-MAY-2000 (TrEMBLrel. 13, Created)
     01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
DT
     01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DT
    Growth hormone (Fragment).
DE
GN
    GH:
OS
    Hippocampus sp.
    Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
    Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei;
OC
    Acanthomorpha; Acanthopterygii; Percomorpha; Gasterosteiformes;
OC
     Syngnathidae; Hippocampus.
OC
OX
    NCBI TaxID=72047;
RN
     [1]
RP
     SEQUENCE FROM N.A.
     STRAIN=Gh4aseahorse;
RC
RX
    MEDLINE=99398697; PubMed=10468597;
     Venkatesh B., Ning Y., Brenner S.;
RA
RT
     "Late changes in spliceosomal introns define clades in vertebrate
RT
     evolution.";
RL
     Proc. Natl. Acad. Sci. U.S.A. 96:10267-10271(1999).
DR
     EMBL; AF134612; AAD54097.1; -.
DR
     GO; GO:0005576; C:extracellular; IEA.
DR
     GO; GO:0005179; F:hormone activity; IEA.
DR
     InterPro; IPR001400; Somatotropin.
DR
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FT
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FT
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Qу
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            9 VETYL 13
RESULT 47
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                                    PRT;
                                            13 AA.
ID
AC
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     01-MAY-2000 (TrEMBLrel. 13, Created)
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01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
DΤ
     01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DΤ
DE
    Growth hormone (Fragment).
GN
    Psettodes sp.
OS
റ്റ
    Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
    Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei;
OC
OC
    Acanthomorpha; Acanthopteryqii; Percomorpha; Pleuronectiformes;
     Psettodoidei; Psettodidae; Psettodes.
OC
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OX
RN
     [1]
RP
     SEQUENCE FROM N.A.
RC
     STRAIN=Gh4aFlatfish;
RX
    MEDLINE=99398697; PubMed=10468597;
    Venkatesh B., Ning Y., Brenner S.;
RA
RT
     "Late changes in spliceosomal introns define clades in vertebrate
RT
    evolution.";
    Proc. Natl. Acad. Sci. U.S.A. 96:10267-10271(1999).
RL
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DR
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DR
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Db
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AC
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DT
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DТ
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DT
    01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DΕ
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GN
OS
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OC
    Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
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OC
OC
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OC
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OX
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RN
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RP
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RC
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RX
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RA
    Venkatesh B., Ning Y., Brenner S.;
RT
     "Late changes in spliceosomal introns define clades in vertebrate
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RT
     evolution.";
RL
     Proc. Natl. Acad. Sci. U.S.A. 96:10267-10271(1999).
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DR
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DR
DR
     GO; GO:0005179; F:hormone activity; IEA.
DR
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Qу
              ||:|:
            9 VETYL 13
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ID
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AC
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DT
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DT
     01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
DT
DΕ
     Growth hormone (Fragment).
GN
     GH.
OS
     Mastacembelus sp.
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OC
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OX
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RN
     [1]
RP
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RC
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RX
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RA
RT
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RT
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     Proc. Natl. Acad. Sci. U.S.A. 96:10267-10271(1999).
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DR
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DR
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DΤ
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DT
     01-JUN-2003 (TrEMBLrel. 24, Last annotation update)
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DE
     Growth hormone (Fragment).
GN
     GH.
os
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OC
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OC
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RA
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RT
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RT
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DR
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DR
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Qу
            1 VESYV 5
              11:1:
Db
            9 VETYL 13
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Search completed: July 4, 2004, 04:45:43 Job time: 17.3134 secs

## GenCore version 5.1.6 Copyright (c) 1993 - 2004 Compugen Ltd.

OM protein - protein search, using sw model

Run on: July 4, 2004, 04:33:26; Search time 3.08955 Seconds

(without alignments)

151.683 Million cell updates/sec

Title: US-09-641-802-31

Perfect score: 48

Sequence: 1 VESYVPLFP 9

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 141681 segs, 52070155 residues

Total number of hits satisfying chosen parameters: 952

Minimum DB seq length: 7
Maximum DB seq length: 18

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 100 summaries

Database: SwissProt 42:\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## SUMMARIES

|        |       | 8     |        |    |            |                    |
|--------|-------|-------|--------|----|------------|--------------------|
| Result |       | Query |        |    |            |                    |
| No.    | Score | Match | Length | DB | ID         | Description        |
|        | ۰     |       | 1.0    |    | ACT FUNCU  | 722000 aushawhia a |
| 1      | 25    | 52.1  | 18     | 1  | AGI_EUPCH  | P33888 euphorbia c |
| 2      | 24    | 50.0  | 9      | 1  | UPA3_HUMAN | P30089 homo sapien |
| 3      | 21    | 43.8  | 15     | 1  | CXA2 CONAL | P56640 conus aulic |
| 4      | 21    | 43.8  | 15     | 1  | PH2_PERAM  | P82695 periplaneta |
| 5      | 21    | 43.8  | 16     | 1  | CXA1 CONAL | P56639 conus aulic |
| 6      | 21    | 43.8  | 16     | 1  | CXA3_CONAL | P56641 conus aulic |
| 7      | 21    | 43.8  | 17     | 1  | PH3 PERAM  | P82696 periplaneta |
| 8      | 20    | 41.7  | 12     | 1  | RF1_CONSP  | P58805 conus spuri |
| 9      | 20    | 41.7  | 15     | 1  | SAL1_ONCMY | P81369 oncorhynchu |
| 10     | 19    | 39.6  | 13     | 1  | TY13 PHYRO | P04096 phyllomedus |
| 11     | 19    | 39.6  | 14     | 1  | ECDC_LYMDI | P80940 lymantria d |
| 12     | 19    | 39.6  | 15     | 1  | COXJ_THUOB | P80979 thunnus obe |
| 13     | 18    | 37.5  | 8      | 1  | UPA1_HUMAN | P30087 homo sapien |
| 14     | 18    | 37.5  | 14     | 1  | PPK6 PERAM | P82693 periplaneta |
| 15     | 18    | 37.5  | 15     | 1  | ECDA_LYMDI | P80938 lymantria d |
| 16     | 18    | 37.5  | 15     | 1  | LPF_ECOLI  | P03057 escherichia |
| 17     | 18    | 37.5  | 15     | 1  | UC17 MAIZE | P80623 zea mays (m |

| 18 | 18   | 37.5 | 1 5 | 1 | UC30 MAIZE                     |   | D00626 | zea mays (m |
|----|------|------|-----|---|--------------------------------|---|--------|-------------|
|    |      |      | 15  | 1 |                                |   |        |             |
| 19 | 18   | 37.5 | 17  | 1 | RM35_YEAST                     |   |        | saccharomyc |
| 20 | 18   | 37.5 | 18  | 1 | FIBB_ANAPL                     |   |        | anas platyr |
| 21 | 17   | 35.4 | 9   | 1 | UPA7_HUMAN                     |   |        | homo sapien |
| 22 | 17   | 35.4 | 12  | 1 | TM2A_METMA                     |   |        | methanosarc |
| 23 | 17   | 35.4 | 17  | 1 | APID_BOMPA                     |   | P81464 | bombus pasc |
| 24 | 16   | 33.3 | 10  | 1 | LPK2_LOCMI                     |   | P41488 | locusta mig |
| 25 | 16   | 33.3 | 10  | 1 | TKNB ONCMY                     |   | P28500 | oncorhynchu |
| 26 | 16   | 33.3 | 11  | 1 | TKND RANCA                     |   | P22691 | rana catesb |
| 27 | 16   | 33.3 | 12  | 1 | GRAR RANRU                     |   | P40754 | rana rugosa |
| 28 | 16   | 33.3 | 13  | 1 | ADFB TENMO                     |   |        | tenebrio mo |
| 29 | 16   | 33.3 | 13  | 1 | YPE2 LACLC                     |   |        | lactococcus |
| 30 | 16   | 33.3 | 16  | 1 | HP29 SARPE                     |   |        | sarcophaga  |
| 31 | 16   | 33.3 | 16  | 1 | VPR HV1S3                      |   |        | human immun |
| 32 | 15.5 | 32.3 | 18  | 1 | AHD2 TETPY                     |   |        | tetrahymena |
| 33 | 15.5 | 31.2 | 8   | 1 | ALL6 CYDPO                     |   |        | cydia pomon |
| 34 | 15   | 31.2 | 8   | 1 | PPK3 PERAM                     |   |        | periplaneta |
|    | 15   |      | 9   | 1 | _                              |   |        |             |
| 35 |      | 31.2 |     |   | LMT3_LOCMI                     |   |        | locusta mig |
| 36 | 15   | 31.2 | 10  | 1 | RT02_BOVIN                     |   |        | bos taurus  |
| 37 | 15   | 31.2 | 10  | 1 | TKNB_CHICK                     |   |        | gallus gall |
| 38 | 15   | 31.2 | 10  | 1 | TKNB_RANRI                     |   |        | rana ridibu |
| 39 | 15   | 31.2 | 10  | 1 | UPA8_HUMAN                     |   |        | homo sapien |
| 40 | 15   | 31.2 | 12  | 1 | NUDM_CANFA                     |   |        | canis famil |
| 41 | 15   | 31.2 | 13  | 1 | CRBL_VESCR                     |   |        | vespa crabr |
| 42 | 15   | 31.2 | 13  | 1 | HPB9_RANES                     |   |        | rana escule |
| 43 | 15   | 31.2 | 13  | 1 | PSAJ_PEA                       |   | P17229 | pisum sativ |
| 44 | 15   | 31.2 | 13  | 1 | TEMA_RANTE                     |   |        | rana tempor |
| 45 | 15   | 31.2 | 13  | 1 | TEMF_RANTE                     | • | P56921 | rana tempor |
| 46 | 15   | 31.2 | 14  | 1 | CRBL VESOR                     |   | P17236 | vespa orien |
| 47 | 15   | 31.2 | 16  | 1 | LPK1 LOCMI                     |   | P20404 | locusta mig |
| 48 | 15   | 31.2 | 16  | 1 | MLB SQUAC                      |   | P01207 | squalus aca |
| 49 | 15   | 31.2 | 18  | 1 | $\overline{\text{ALL2}}$ CYDPO |   |        | cydia pomon |
| 50 | 15   | 31.2 | 18  | 1 | CPAX BOVIN                     |   |        | bos taurus  |
| 51 | 15   | 31.2 | 18  | 1 | FMF1 ECOLI                     |   |        | escherichia |
| 52 | 14   | 29.2 | 7   | 1 | TPFY PACDA                     |   |        | pachymedusa |
| 53 | 14   | 29.2 | 7   | 1 | TY51 LITRU                     |   |        | litoria rub |
| 54 | 14   | 29.2 | 8   | 1 | LPK LEUMA                      |   |        | leucophaea  |
| 55 | 14   | 29.2 | 9   | 1 | COXE THUOB                     |   |        | thunnus obe |
| 56 | 14   | 29.2 | 11  | 1 | PKC1 CARMO                     |   |        | carausius m |
| 57 | 14   | 29.2 | 11  | 1 | TIN4 HOPTI                     |   |        | hoplobatrac |
| 58 | 14   | 29.2 | 12  | 1 | TIN2 HOPTI                     |   |        | hoplobatrac |
| 59 | 14   | 29.2 | 12  | 1 | TINZ_HOTTI                     |   |        | hoplobatrac |
| 60 | 14   | 29.2 | 13  | 1 | IDHA CANFA                     |   |        | canis famil |
| 61 | 14   |      | 14  | 1 | _                              |   |        |             |
|    |      | 29.2 |     |   | CAL1_CALGI                     |   |        | calotropis  |
| 62 | 14   | 29.2 | 14  | 1 | HY14_PIG                       |   |        | sus scrofa  |
| 63 | 14   | 29.2 | 14  | 1 | MCRZ_METTM                     |   |        | methanobact |
| 64 | 14   | 29.2 | 14  | 1 | PH1_PRUSE                      |   |        | prunus sero |
| 65 | 14   | 29.2 | 15  | 1 | CX3A_CONQU                     |   |        | conus querc |
| 66 | 14   | 29.2 | 15  | 1 | CX3B_CONQU                     |   |        | conus querc |
| 67 | 14   | 29.2 | 15  | 1 | LEC1_PSOSC                     |   |        | psophocarpu |
| 68 | 14   | 29.2 | 15  | 1 | LEC3_AXIPO                     |   |        | axinella po |
| 69 | 14   | 29.2 | 15  | 1 | PH3_PRUSE                      |   |        | prunus sero |
| 70 | 14   | 29.2 | 15  |   | PSAO_CUCSA                     |   |        | cucumis sat |
| 71 | 14   | 29.2 | 15  | 1 | UC08_MAIZE                     | 1 | P80614 | zea mays (m |
| 72 | 14   | 29.2 | 15  | 1 | UC29_MAIZE                     | 1 | P80635 | zea mays (m |
| 73 | 14   | 29.2 | 15  | 1 | URE1_MORMO                     | ] | P17337 | morganella  |
| 74 | 14   | 29.2 | 16  | 1 | PGTL PELAC                     | ] | P80563 | pelobacter  |
|    |      |      |     |   |                                |   |        |             |

| 75  | 14 | 29.2 | 16  | 1 | PH2 PRUSE               | P29264 | prunus sero |
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| 77  | 14 | 29.2 | .17 | 1 | ALYS MYCPH              | P81528 | mycobacteri |
| 78  | 14 | 29.2 | 17  | 1 | PH4 PERAM               | P82697 | periplaneta |
| 79  | 14 | 29.2 | 17  | 1 | TPIS PINPS              | P81666 | pinus pinas |
| 80  | 13 | 27.1 | 7   | 1 | ALL2 CARMA              | P81805 | carcinus ma |
| 81  | 13 | 27.1 | 8   | 1 | AKH MELML               | P25423 | melolontha  |
| 82  | 13 | 27.1 | 9   | 1 | PGLR_DIAAB              | P81179 | diaprepes a |
| 83  | 13 | 27.1 | 9   | 1 | PPK1 PERAM              | P82691 | periplaneta |
| 84  | 13 | 27.1 | 9   | 1 | SAMP_MUSCA              | P19095 | mustelus ca |
| 85  | 13 | 27.1 | 10  | 1 | PVK_LOCMI               | P83382 | locusta mig |
| 86  | 13 | 27.1 | 10  | 1 | Q2OB_COMTE              | P80465 | comamonas t |
| 87  | 13 | 27.1 | 10  | 1 | SLAP_BACTG              | P49325 | bacillus th |
| 88  | 13 | 27.1 | 10  | 1 | TMOF_AEDAE              | P19425 | aedes aegyp |
| 89  | 13 | 27.1 | 11  | 1 | MORN_HUMAN              | P01163 | homo sapien |
| 90  | 13 | 27.1 | 13  | 1 | ACT7_SOYBN              | P15987 | glycine max |
| 91  | 13 | 27.1 | 13  | 1 | BP37_LEUMA              | P81754 | leucophaea  |
| 92  | 13 | 27.1 | 13  | 1 | CRBL_VESAN              | P17233 | vespa anali |
| 93  | 13 | 27.1 | 13  | 1 | CRBL_VESLE              | P17235 | vespula lew |
| 94  | 13 | 27.1 | 13  | 1 | CRBL_VESMA              |        | vespa manda |
| 95  | 13 | 27.1 | 13  | 1 | CRBL_VESTR              | P17231 | vespa tropi |
| 96  | 13 | 27.1 | 13  | 1 | CRBL_VESXA              |        | vespa xanth |
| 97  | 13 | 27.1 | 13  | 1 | LMT4_LOCMI              |        | locusta mig |
| 98  | 13 | 27.1 | 13  | 1 | MP1_MICOC               |        | microplitis |
| 99  | 13 | 27.1 | 14  | 1 | $ATP\overline{6}_SPIOL$ | P80086 | spinacia ol |
| 100 | 13 | 27.1 | 14  | 1 | EFTU_CANFA              | P54835 | canis famil |

## ALIGNMENTS

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RESULT 1
AGI_EUPCH
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                    STANDARD;
                                   PRT;
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     01-FEB-1994 (Rel. 28, Last sequence update)
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     01-FEB-1994 (Rel. 28, Last annotation update)
DΕ
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OS
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OC
     Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
OC
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OC
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OC
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RN
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RP
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RC
    TISSUE=Latex;
RX
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RA
     Stirpe F., Licastro F., Morini M.C., Parente A., Savino G.,
RA
    Abbondanza A., Bolognesi A., Falasca A.I., Rossi C.A.;
RT
     "Purification and partial characterization of a mitogenic lectin from
RT
     the latex of Euphorbia marginata.";
RL
     Biochim. Biophys. Acta 1158:33-39(1993).
CC
     -!- FUNCTION: Lectin that binds galactose, galactose-containing sugars
CC
         and gentiobiose. It is strongly mitogenic for human T lymphocytes.
CC
     -!- SUBUNIT: Homodimer.
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-!- PTM: N-glycosylated.
CC
     -!- SIMILARITY: TO E.MARGINATA LECTIN.
CC
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DR
KW
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FT
    NON TER
                  18
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                                                   1; Indels
                                                                 0; Gaps
           2 ESYVPL 7
Qу
              | | | | :
           2 ESYTPI 7
Db
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                                            9 AA.
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AC
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DT
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     01-APR-1993 (Rel. 25, Last sequence update)
DT.
     15-MAR-2004 (Rel. 43, Last annotation update)
DT
    Unknown protein from 2D-page of plasma (Spot 11) (Fragment).
DE
OS
    Homo sapiens (Human).
OC
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OC
    Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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OX
RN
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RP
     SEQUENCE.
RC
    TISSUE=Plasma;
    MEDLINE=93092937; PubMed=1459097;
RX
RA
    Hughes G.J., Frutiger S., Paquet N., Ravier F., Pasquali C.,
RA
     Sanchez J.-C., James R., Tissot J.-D., Bjellqvist B.,
RA
    Hochstrasser D.F.;
RT
     "Plasma protein map: an update by microsequencing.";
RL
     Electrophoresis 13:707-714(1992).
CC
     -!- MISCELLANEOUS: On the 2D-gel the determined pI of this unknown
CC
        protein is: 4.6, its MW is: 46 kDa.
     SWISS-2DPAGE; P30089; HUMAN.
DR
FT
     NON TER
                  1
                          1
FT
     NON TER
                   9
SO
     SEQUENCE
                9 AA; 1056 MW; 26F2B1BAF769C737 CRC64;
 Query Match
                          50.0%; Score 24; DB 1; Length 9;
  Best Local Similarity
                         100.0%; Pred. No. 1.4e+05;
 Matches
            4; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
                                                                             0;
            6 PLFP 9
Qу
              1111
Db
            2 PLFP 5
RESULT 3
CXA2 CONAL
     CXA2 CONAL
                    STANDARD;
                                   PRT;
                                           15 AA.
AC
     P56640;
```

```
15-DEC-1998 (Rel. 37, Created)
     15-DEC-1998 (Rel. 37, Last sequence update)
DT
DT
     15-MAR-2004 (Rel. 43, Last annotation update)
    Alpha-conotoxin AuIB.
DE
OS
    Conus aulicus (Court cone).
OC
     Eukaryota; Metazoa; Mollusca; Gastropoda; Orthogastropoda;
     Apogastropoda; Caenogastropoda; Sorbeoconcha; Hypsogastropoda;
OC
OC
     Neogastropoda; Conoidea; Conidae; Conus.
OX
     NCBI TaxID=89437;
RN
     [1]
RP
     SEQUENCE, SYNTHESIS, AND MASS SPECTROMETRY.
RC
     TISSUE=Venom;
RX
    MEDLINE=99003392; PubMed=9786965;
     Luo S., Kulak J.M., Cartier G.E., Jacobsen R.B., Yoshikami D.,
RA
RA
     Olivera B.M., McIntosh J.M.;
RT
     "Alpha-conotoxin AuIB selectively blocks alpha3 beta4 nicotinic
RТ
     acetylcholine receptors and nicotine-evoked norepinephrine release.";
RL
     J. Neurosci. 18:8571-8579(1998).
RN
RP
     STRUCTURE BY NMR.
    MEDLINE=20187585; PubMed=10722709;
RX
     Cho J.H., Mok K.H., Olivera B.M., McIntosh J.M., Park K.H., Han K.H.;
RA
     "Nuclear magnetic resonance solution conformation of alpha-conotoxin
RT
    AuIB, an alpha(3)beta(4) subtype-selective neuronal nicotinic
RT
RT
     acetylcholine receptor antagonist.";
     J. Biol. Chem. 275:8680-8685(2000).
RL
RN
     [3]
RP
     STRUCTURE BY NMR.
RX
    MEDLINE=22359066; PubMed=12376538;
RA
     Dutton J.L., Bansal P.S., Hogg R.C., Adams D.J., Alewood P.F.,
RA
     Craik D.J.;
     "A new level of conotoxin diversity, a non-native disulfide bond
RT
RT
     connectivity in alpha-conotoxin AuIB reduces structural definition
RT
     but increases biological activity.";
RL
     J. Biol. Chem. 277:48849-48857(2002).
CC
     -!- FUNCTION: Alpha-conotoxins act on postsynaptic membranes, they
CC
        bind to the nicotinic acetylcholine receptors (nAChR) and thus
CC
         inhibit them. This peptide blocks mammalian nicotinic
CC
         acetylcholine receptors composed of alpha-3/beta-4 subunits.
CC
     -!- SUBCELLULAR LOCATION: Secreted.
CC
     -!- TISSUE SPECIFICITY: Expressed by the venom duct.
CC
     -!- MASS SPECTROMETRY: MW=1572.5; METHOD=Electrospray.
CC
     -!- SIMILARITY: Belongs to the conotoxin A-superfamily. Alpha-type
CC
         family.
DR
     PDB; 1DG2; 23-MAY-00.
DR
     PDB; 1MXN; 30-DEC-02.
     PDB; 1MXP; 30-DEC-02.
     Postsynaptic neurotoxin; Neurotoxin; Toxin;
KW
     Acetylcholine receptor inhibitor; Amidation; 3D-structure.
FT
     DISULFID
                   2
                          8
                   3
FT
    DISULFID
                         15
                  15
                         15
FT
    MOD RES
                                  AMIDATION.
SQ
     SEQUENCE
               15 AA; 1578 MW; 84EFE95FDC700155 CRC64;
 Query Match
                          43.8%; Score 21; DB 1; Length 15;
                          66.7%; Pred. No. 3.8e+02;
 Best Local Similarity
 Matches
             4; Conservative
                                 0; Mismatches
                                                  2; Indels
                                                                 0; Gaps
                                                                              0;
```

```
3 SYVPLF 8
Οv
              \square
            4 SYPPCF 9
Db
RESULT 4
PH2 PERAM
     PH2 PERAM
                    STANDARD;
                                    PRT:
                                            15 AA.
AC
     P82695;
DT
     16-OCT-2001 (Rel. 40, Created)
DT
     16-OCT-2001 (Rel. 40, Last sequence update)
DT
     16-OCT-2001 (Rel. 40, Last annotation update)
     Peptide hormone 2 (Pea-VEAacid 2).
DE
     Periplaneta americana (American cockroach).
OS
OC
     Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
OC
     Neoptera; Orthopteroidea; Dictyoptera; Blattaria; Blattoidea;
OC
     Blattidae; Periplaneta.
OX
     NCBI TaxID=6978;
RN
     [1]
RP
     SEQUENCE.
     TISSUE=Abdominal perisympathetic organs;
RC
RA
     Predel R.;
     Submitted (JUL-2000) to Swiss-Prot.
RĹ
     -!- FUNCTION: Unknown.
CC
KW
     Neuropeptide.
SQ
     SEQUENCE
               15 AA; 1603 MW; F353DC8B1F92B8BD CRC64;
                                  Score 21; DB 1; Length 15;
  Query Match
                          43.8%;
  Best Local Similarity
                          80.0%; Pred. No. 3.8e+02;
  Matches
             4; Conservative
                                 1; Mismatches
                                                    0; Indels
                                                                  0; Gaps
                                                                               0;
Qу
            1 VESYV 5
              1:11
            9 VDSYV 13
RESULT 5
CXA1 CONAL
ID
     CXA1 CONAL
                    STANDARD;
                                    PRT;
                                            16 AA.
AC
     P56639;
DT
     15-DEC-1998 (Rel. 37, Created)
     15-DEC-1998 (Rel. 37, Last sequence update)
DΤ
DT
     15-MAR-2004 (Rel. 43, Last annotation update)
DΕ
     Alpha-conotoxin AuIA.
OS
     Conus aulicus (Court cone).
OC
     Eukaryota; Metazoa; Mollusca; Gastropoda; Orthogastropoda;
OC
     Apogastropoda; Caenogastropoda; Sorbeoconcha; Hypsogastropoda;
     Neogastropoda; Conoidea; Conidae; Conus.
OC
     NCBI TaxID=89437;
OX
RN
     [1]
RP
     SEQUENCE, SYNTHESIS, AND MASS SPECTROMETRY.
RC
     TISSUE=Venom;
RX
     MEDLINE=99003392; PubMed=9786965;
RA
     Luo S., Kulak J.M., Cartier G.E., Jacobsen R.B., Yoshikami D.,
RA
     Olivera B.M., McIntosh J.M.;
RT
     "Alpha-conotoxin AuIB selectively blocks alpha3 beta4 nicotinic
```

```
RT
     acetylcholine receptors and nicotine-evoked norepinephrine release.";
     J. Neurosci. 18:8571-8579(1998).
RL
CC
     -!- FUNCTION: Alpha-conotoxins act on postsynaptic membranes, they
CC
         bind to the nicotinic acetylcholine receptors (nAChR) and thus
CC
         inhibit them. This peptide blocks mammalian nicotinic
CC
         acetylcholine receptors composed of alpha-3/beta-4 subunits.
CC
    -!- SUBCELLULAR LOCATION: Secreted.
CC
     -!- TISSUE SPECIFICITY: Expressed by the venom duct.
CC
     -!- MASS SPECTROMETRY: MW=1725.6; METHOD=Electrospray.
CC
     -!- SIMILARITY: Belongs to the conotoxin A-superfamily. Alpha-type
CC
         family.
DR
     PIR; A59045; A59045.
DR
     HSSP; P50984; 1PEN.
KW
     Postsynaptic neurotoxin; Neurotoxin; Toxin;
    Acetylcholine receptor inhibitor; Amidation.
KW
\mathbf{FT}
                   2
    DISULFID
                          8
FT
     DISULFID
                   3
                         16
FT
    MOD RES
                  16
                         16
                                  AMIDATION.
    SEQUENCE
                16 AA; 1731 MW; 1E310FEB8FDC7001 CRC64;
SQ
  Query Match
                          43.8%;
                                  Score 21; DB 1; Length 16;
                          66.7%; Pred. No. 4.1e+02;
  Best Local Similarity
 Matches
            4; Conservative
                                 0; Mismatches
                                                   2; Indels
                                                                              0;
                                                                  0; Gaps
            3 SYVPLF 8
Qу
              IIIII
Db
            4 SYPPCF 9
RESULT 6
CXA3 CONAL
     CXA3 CONAL
                    STANDARD;
                                   PRT;
                                           16 AA.
ID
AC
     P56641;
DT
     15-DEC-1998 (Rel. 37, Created)
     15-DEC-1998 (Rel. 37, Last sequence update)
DT
DT
     28-FEB-2003 (Rel. 41, Last annotation update)
DE
    Alpha-conotoxin AuIC.
OS
    Conus aulicus (Court cone).
OC
     Eukaryota; Metazoa; Mollusca; Gastropoda; Orthogastropoda;
OC
    Apogastropoda; Caenogastropoda; Sorbeoconcha; Hypsogastropoda;
OC
     Neogastropoda; Conoidea; Conidae; Conus.
OX
     NCBI TaxID=89437;
RN
     [1]
RP
     SEQUENCE, SYNTHESIS, AND MASS SPECTROMETRY.
RC
    TISSUE=Venom;
RX
     MEDLINE=99003392; PubMed=9786965;
     Luo S., Kulak J.M., Cartier G.E., Jacobsen R.B., Yoshikami D.,
RA
RA
    Olivera B.M., McIntosh J.M.;
RT
     "Alpha-conotoxin AuIB selectively blocks alpha3 beta4 nicotinic
RT
     acetylcholine receptors and nicotine-evoked norepinephrine release.";
RL
     J. Neurosci. 18:8571-8579(1998).
CC
     -!- FUNCTION: Alpha-conotoxins act on postsynaptic membranes, they
CC
         bind to the nicotinic acetylcholine receptors (nAChR) and thus
CC
         inhibit them. This peptide blocks mammalian nicotinic
CC
         acetylcholine receptors composed of alpha-3/beta-4 subunits.
CC
    -!- SUBCELLULAR LOCATION: Secreted.
CC
     -!- TISSUE SPECIFICITY: Expressed by the venom duct.
```

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CC
     -!- MASS SPECTROMETRY: MW=1667.6; METHOD=Electrospray.
     -!- SIMILARITY: Belongs to the conotoxin A-superfamily. Alpha-type
CC
         family.
CC
     PIR; C59045; C59045.
DR
DR
    HSSP; P50984; 1PEN.
KW
    Postsynaptic neurotoxin; Neurotoxin; Toxin;
KW
    Acetylcholine receptor inhibitor; Amidation.
FT
    DISULFID
                   2
                          8
FT
    DISULFID
                   3
                         16
FT
    MOD RES
                  16
                                  AMIDATION.
                         16
    SEQUENCE
                                  1E310D3B8FDC7001 CRC64;
                16 AA; 1673 MW;
SQ
                          43.8%;
  Query Match
                                  Score 21; DB 1; Length 16;
  Best Local Similarity 66.7%; Pred. No. 4.1e+02;
 Matches
                                0; Mismatches
             4; Conservative
                                                   2; Indels
                                                                  0; Gaps
                                                                              0;
            3 SYVPLF 8
Qy
              11 + 1
            4 SYPPCF 9
Db
RESULT 7
PH3 PERAM
ID
    PH3 PERAM
                    STANDARD;
                                   PRT;
                                           17 AA.
    P82696:
AC
DΤ
    16-OCT-2001 (Rel. 40, Created)
    16-OCT-2001 (Rel. 40, Last sequence update)
DT
    16-OCT-2001 (Rel. 40, Last annotation update)
DT
    Peptide hormone 3 (Pea-VEAacid 1).
DE
OS
    Periplaneta americana (American cockroach).
    Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
OC
    Neoptera; Orthopteroidea; Dictyoptera; Blattaria; Blattoidea;
OC
OC
    Blattidae; Periplaneta.
OX
    NCBI TaxID=6978;
RN
    [1]
RP
    SEQUENCE, AND MASS SPECTROMETRY.
RC
    TISSUE=Abdominal perisympathetic organs;
RX
    MEDLINE=20140865; PubMed=10676456;
RA
    Predel R., Eckert M., Holman G.M.;
RT
     "The unique neuropeptide pattern in abdominal perisympathetic organs
RT
    of insects.";
RL
    Ann. N.Y. Acad. Sci. 897:282-290(1999).
    -!- FUNCTION: Unknown.
CC
    -!- MASS SPECTROMETRY: MW=1651.35; METHOD=MALDI.
CC
KW
    Neuropeptide.
SQ
    SEQUENCE
               17 AA; 1807 MW; 2374AC8B1F86E8EB CRC64;
  Query Match
                          43.8%;
                                  Score 21; DB 1; Length 17;
  Best Local Similarity 80.0%;
                                 Pred. No. 4.4e+02;
                                 1; Mismatches
             4; Conservative
                                                   0: Indels
                                                                  0; Gaps
                                                                              0;
            1 VESYV 5
Qу
              1:11
Db
           11 VDSYV 15
```

```
RF1 CONSP
     RF1 CONSP
                                    PRT:
                                            12 AA.
ID
                    STANDARD;
     P58805;
AC
     28-FEB-2003 (Rel. 41, Created)
DT
DT
     28-FEB-2003 (Rel. 41, Last sequence update)
DT
     28-FEB-2003 (Rel. 41, Last annotation update)
     Conorfamide-Srl.
DE
os
     Conus spurius (Alphabet cone).
     Eukaryota; Metazoa; Mollusca; Gastropoda; Orthogastropoda;
OC
     Apogastropoda; Caenogastropoda; Sorbeoconcha; Hypsogastropoda;
OC
     Neogastropoda; Conoidea; Conidae; Conus.
OC
OX
     NCBI TaxID=192919;
RN
     [1]
     SEQUENCE, SYNTHESIS, AND MASS SPECTROMETRY.
RP
RC
     TISSUE=Venom;
RX
     MEDLINE=21605839; PubMed=11738233;
    Maillo M., Aguilar M.B., Lopez-Vera E., Craig A.G., Bulaj G.,
RA
     Olivera B.M., Heimer de la Cotera E.P.;
RA
     "Conorfamide, a Conus venom peptide belonging to the RFamide family of
RT
     neuropeptides.";
RT
     Toxicon 40:401-407(2002).
RL
     -!- FUNCTION: Causes hyperactivity in mice.
CC
     -!- SUBCELLULAR LOCATION: Secreted.
CC
CC
     -!- TISSUE SPECIFICITY: Expressed by the venom duct.
     -!- MASS SPECTROMETRY: MW=1454.8; METHOD=Electrospray.
CC
     -!- SIMILARITY: Belongs to the FARP (FMRFamide related peptide)
CC
CC
         family.
KW
     Neurotoxin; Toxin; Amidation.
                                   AMIDATION.
FT
     MOD RES
                  12
                         12
SQ
     SEQUENCE
                12 AA; 1456 MW; 2510671E49D772D3 CRC64;
                          41.7%; Score 20; DB 1; Length 12;
  Query Match
  Best Local Similarity
                          60.0%; Pred. No. 4.7e+02;
  Matches
             3; Conservative
                                 2; Mismatches
                                                  0; Indels
                                                                  0; Gaps
            4 YVPLF 8
Qy
              : | | : |
Db
            5 WVPVF 9
RESULT 9
SAL1 ONCMY
ID
     SAL1 ONCMY
                    STANDARD;
                                    PRT;
                                            15 AA.
     P81369;
AC
DT
     15-JUL-1999 (Rel. 38, Created)
DT
     15-JUL-1999 (Rel. 38, Last sequence update)
DT
     16-OCT-2001 (Rel. 40, Last annotation update)
DE
     Salmocidin 1 (Fragment).
OS
     Oncorhynchus mykiss (Rainbow trout) (Salmo gairdneri).
OC
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
     Actinopterygii; Neopterygii; Teleostei; Euteleostei;
     Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus.
OC
OX
     NCBI TaxID=8022;
RN
     [1]
RΡ
     SEQUENCE.
RC
     TISSUE=Serum;
RA
     Henry M.A., Siegert K.J., Davidson I., Dunbar B., Mordue W.,
```

```
RA
     Secombes C.J.;
     "Isolation and N-terminal sequencing of an antibacterial peptide in
RT
     rainbow trout, Oncorhynchus mykiss.";
RT
     Submitted (MAY-1998) to Swiss-Prot.
RL
CC
     -!- FUNCTION: Antibacterial peptide.
CC
     -!- SUBCELLULAR LOCATION: Secreted.
CC
     -!- TISSUE SPECIFICITY: Plasma serum.
KW
    Antibiotic.
    NON TER
FT
                  15
                         15
     SEQUENCE
               15 AA; 1586 MW; 3AF4AD95AFAB26D0 CRC64;
SQ
                          41.7%; Score 20; DB 1; Length 15;
  Query Match
                          50.0%; Pred. No. 6e+02;
  Best Local Similarity
            3; Conservative
                                 1; Mismatches
                                                   2; Indels
                                                                  0; Gaps
 Matches
            4 YVPLFP 9
Qу
              1:1
           10 YLPAXP 15
Db
RESULT 10
TY13 PHYRO
                                   PRT;
                                           13 AA.
     TY13 PHYRO
                    STANDARD;
ID
     P04096;
AC
     01-NOV-1986 (Rel. 03, Created)
DT
     01-NOV-1986 (Rel. 03, Last sequence update)
DT
     10-OCT-2003 (Rel. 42, Last annotation update)
DT
DΕ
     Tryptophyllin-13.
     Phyllomedusa rohdei (Rohde's leaf frog).
OS
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
     Amphibia; Batrachia; Anura; Neobatrachia; Hyloidea; Hylidae;
OC
     Phyllomedusinae; Phyllomedusa.
OC
OX
     NCBI_TaxID=8394;
RN
     [1]
RP
     SEQUENCE.
     Montecucchi P.C., Gozzini L., Erspamer V.;
RA
RT
     "Primary structure determination of a tryptophan-containing
RT
     tridecapeptide from Phyllomedusa rohdei.";
     Int. J. Pept. Protein Res. 27:175-182(1986).
RL
     -!- SUBCELLULAR LOCATION: Secreted.
CC
     -!- TISSUE SPECIFICITY: Skin.
CC
DR
     PIR; A05174; A05174.
     Amphibian defense peptide; Pyrrolidone carboxylic acid.
KW
                                  PYRROLIDONE CARBOXYLIC ACID.
FT
     MOD RES
                   1
                          1
                13 AA; 1646 MW;
                                  33BF33A212227773 CRC64;
SQ
     SEQUENCE
                                  Score 19; DB 1; Length 13;
  Query Match
                          39.6%;
  Best Local Similarity 50.0%; Pred. No. 8.2e+02;
                                                                  0; Gaps
                                                                              0;
  Matches
             2; Conservative
                               2; Mismatches
                                                 0; Indels
            6 PLFP 9
Qу
              |\cdot|:\cdot|
Db
            9 PIYP 12
```

RESULT 11 ECDC\_LYMDI

```
ECDC LYMDI
                                   PRT;
                                           14 AA.
                    STANDARD:
ID
AC
     P80940;
     15-JUL-1998 (Rel. 36, Created)
DT
    15-JUL-1998 (Rel. 36, Last sequence update)
DΤ
DT
     15-JUL-1998 (Rel. 36, Last annotation update)
DΕ
    Testis ecdysiotropin peptide C (TE).
     Lymantria dispar (Gypsy moth).
OS
     Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
OC
    Neoptera; Endopterygota; Lepidoptera; Glossata; Ditrysia; Noctuoidea;
OC
    Lymantriidae; Lymantria.
OC
OX
    NCBI TaxID=13123;
RN
     [1]
RP
    SEQUENCE.
RC
    TISSUE=Brain;
    MEDLINE=97387807; PubMed=9243792;
RX
    Loeb M.J., Wagner R.M., Woods C.W., Gelman D.G., Harrison D.,
RA
RA
     "Naturally occurring analogs of Lymantria testis ecdysiotropin, a
RT
    gonadotropin isolated from brains of Lymantria dispar pupae.";
RT
    Arch. Insect Biochem. Physiol. 36:37-50(1997).
RL
     -!- FUNCTION: Stimulates synthesis of ecdysteroid in the testes of
CC
CC
         larvae and pupae.
                14 AA; 1553 MW; 17F479531A685CBB CRC64;
     SEQUENCE
SQ
                          39.6%;
                                  Score 19; DB 1; Length 14;
 Query Match
                          60.0%; Pred. No. 8.8e+02;
  Best Local Similarity
                                 1; Mismatches
                                                    1; Indels
                                                                  0; Gaps
                                                                               0;
 Matches
            3; Conservative
            3 SYVPL 7
Qу
              : 1 11
            6 AYTPL 10
Db
RESULT 12
COXJ THUOB
     COXJ THUOB
                    STANDARD;
                                   PRT;
                                            15 AA.
ID
AC
     P80979;
DT
     01-NOV-1997 (Rel. 35, Created)
DT
     01-NOV-1997 (Rel. 35, Last sequence update)
     16-OCT-2001 (Rel. 40, Last annotation update)
DT
     Cytochrome c oxidase polypeptide VIIa (EC 1.9.3.1) (Fragment).
DE
OS
     Thunnus obesus (Bigeye tuna).
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
     Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei;
OC
     Acanthomorpha; Acanthopterygii; Percomorpha; Perciformes; Scombroidei;
OC
OC
     Scombridae; Thunnus.
OX
     NCBI TaxID=8241;
RN
     [1]
RP
     SEQUENCE.
RC
     TISSUE=Heart, and Liver;
RX
     MEDLINE=97454291; PubMed=9310366;
RA
     Arnold S., Lee I., Kim M., Song E., Linder D., Lottspeich F.,
RA
     Kadenbach B.;
     "The subunit structure of cytochrome-c oxidase from tuna heart and
RT
RT
     liver.";
RL
     Eur. J. Biochem. 248:99-103(1997).
CC
     -!- FUNCTION: This protein is one of the nuclear-coded polypeptide
```

```
chains of cytochrome c oxidase, the terminal oxidase in
CC
        mitochondrial electron transport.
CC
    -!- CATALYTIC ACTIVITY: 4 ferrocytochrome c + O(2) = 4 ferricytochrome
CC
        c + 2 H(2)0.
CC
    -!- SUBCELLULAR LOCATION: Mitochondrial inner membrane.
CC
    -!- SIMILARITY: Belongs to the cytochrome c oxidase VIIa family.
CC
    PIR; S77988; S77988.
DR
    Oxidoreductase; Inner membrane; Mitochondrion.
KW
    MOD RES
                                 BLOCKED.
FT
                 1
                        1.
    NON TER
                 15
                        15
FT
              15 AA; 1769 MW; C111B99419E69A1E CRC64;
    SEQUENCE
SQ
                         39.6%; Score 19; DB 1; Length 15;
 Query Match
  Best Local Similarity 75.0%; Pred. No. 9.5e+02;
                                                                0; Gaps
                                                                             0;
           3; Conservative 1; Mismatches 0; Indels
 Matches
            3 SYVP 6
Qу
             : | | |
           2 NYVP 5
Db
RESULT 13
UPA1 HUMAN
                                           8 AA.
    UPA1 HUMAN
                                  PRT;
                   STANDARD;
    P30087:
AC
DТ
     01-APR-1993 (Rel. 25, Created)
     01-APR-1993 (Rel. 25, Last sequence update)
DT
    15-MAR-2004 (Rel. 43, Last annotation update)
DT
    Unknown protein from 2D-page of plasma (Spot 2) (Fragment).
DE
OS
    Homo sapiens (Human).
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
    Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OC
OX
    NCBI TaxID=9606;
RN
     [1]
RP
    SEQUENCE.
RC
    TISSUE=Plasma;
RX
    MEDLINE=93092937; PubMed=1459097;
RA
     Hughes G.J., Frutiger S., Paquet N., Ravier F., Pasquali C.,
     Sanchez J.-C., James R., Tissot J.-D., Bjellqvist B.,
RA
RA
    Hochstrasser D.F.;
     "Plasma protein map: an update by microsequencing.";
RT
RL
     Electrophoresis 13:707-714(1992).
     -!- MISCELLANEOUS: On the 2D-gel the determined pI of this unknown
CC
         protein is: 4.9, its MW is: 65 kDa.
CC
     SWISS-2DPAGE; P30087; HUMAN.
DR
FT
    NON TER
                   1
                          1
FT
    UNSURE
                   8
                          8
FT
     NON TER
                   8
                          8
     SEQUENCE 8 AA; 944 MW; C01772C455BB06DA CRC64;
SQ
  Query Match
                          37.5%; Score 18; DB 1; Length 8;
                         80.0%; Pred. No. 1.4e+05;
  Best Local Similarity
          4; Conservative 0; Mismatches 1; Indels 0; Gaps
                                                                             0;
  Matches
Qу
            2 ESYVP 6
              +1
Db
            3 ESNVP 7
```

```
RESULT 14
PPK6 PERAM
     PPK6 PERAM
                    STANDARD;
                                   PRT;
                                            14 AA.
AC
     P82693;
DТ
     16-OCT-2001 (Rel. 40, Created)
     16-OCT-2001 (Rel. 40, Last sequence update)
DT
     16-OCT-2001 (Rel. 40, Last annotation update)
DΤ
     Pyrokinin-6 (Pea-PK-6) (FXPRL-amide).
DE
OS
     Periplaneta americana (American cockroach).
OC
     Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
     Neoptera; Orthopteroidea; Dictyoptera; Blattaria; Blattoidea;
OC
OC
     Blattidae; Periplaneta.
     NCBI_TaxID=6978;
OX
RN
     [1]
     SEQUENCE, FUNCTION, TISSUE SPECIFICITY, AND MASS SPECTROMETRY.
RP
RC
     TISSUE=Abdominal perisympathetic organs, and Corpora cardiaca;
     MEDLINE=20189894; PubMed=10723010;
RX
     Predel R., Eckert M.;
RA
     "Tagma-specific distribution of FXPRLamides in the nervous system of
RT
RT
     the American cockroach.";
     J. Comp. Neurol. 419:352-363(2000).
RL
CC
     -!- FUNCTION: Shows a weakly myoactive action.
     -!- TISSUE SPECIFICITY: Corpora alata and to a lesser extent in
CC
CC
         abdominal perisympathetic organs.
     -!- MASS SPECTROMETRY: MW=1590.8; METHOD=MALDI.
CC
     -!- SIMILARITY: Belongs to the pyrokinin family.
CC
     InterPro; IPR001484; Pyrokinin.
DR
DR
     PROSITE; PS00539; PYROKININ; 1.
KW
     Amidation; Pyrokinin.
FT
     MOD RES
                  14
                         14
                                  AMIDATION.
SO
     SEQUENCE
                14 AA; 1592 MW; 3966CC3FF384A998 CRC64;
  Query Match
                          37.5%; Score 18; DB 1; Length 14;
  Best Local Similarity
                          80.0%; Pred. No. 1.4e+03;
  Matches
             4; Conservative
                                 0; Mismatches
                                                    1; Indels
                                                                   0; Gaps
                                                                               0;
            2 ESYVP 6
Qу
              \Pi
Db
            2 ESEVP 6
RESULT 15
ECDA LYMDI
ΙD
     ECDA LYMDI
                    STANDARD;
                                    PRT;
                                            15 AA.
AC
     P80938;
DT
     15-JUL-1998 (Rel. 36, Created)
     15-JUL-1998 (Rel. 36, Last sequence update)
DT
DT
     15-JUL-1998 (Rel. 36, Last annotation update)
     Testis ecdysiotropin peptide A (TE).
DE
     Lymantria dispar (Gypsy moth).
OS
OC
     Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
OC
     Neoptera; Endopterygota; Lepidoptera; Glossata; Ditrysia; Noctuoidea;
OC
     Lymantriidae; Lymantria.
OX
     NCBI TaxID=13123;
RN
     [1]
```

```
SEQUENCE.
RP
RC
     TISSUE=Brain;
     MEDLINE=97387807; PubMed=9243792;
RX
     Loeb M.J., Wagner R.M., Woods C.W., Gelman D.G., Harrison D.,
RA
RA
     Bell R.A.;
RT
     "Naturally occurring analogs of Lymantria testis ecdysiotropin, a
     gonadotropin isolated from brains of Lymantria dispar pupae.";
RT
     Arch. Insect Biochem. Physiol. 36:37-50(1997).
RL
CC
     -!- FUNCTION: Stimulates synthesis of ecdysteroid in the testes
CC
         of larvae and pupae.
     SEQUENCE 15 AA; 1712 MW; 12E8D8246B74EE26 CRC64;
SQ
  Query Match
                          37.5%; Score 18; DB 1; Length 15;
  Best Local Similarity
                          50.0%; Pred. No. 1.5e+03;
 Matches
             3; Conservative
                               1; Mismatches
                                                                  0; Gaps
                                                                              0;
                                                 2; Indels
            2 ESYVPL 7
Qу
              : | ||
Db
            6 DEYEPL 11
RESULT 16
LPF ECOLI
     LPF ECOLI
ID
                    STANDARD;
                                   PRT;
                                           15 AA.
     P03057;
AC
     21-JUL-1986 (Rel. 01, Created)
DT
DT
     21-JUL-1986 (Rel. 01, Last sequence update)
     10-OCT-2003 (Rel. 42, Last annotation update)
DT
DE
     Phe leader peptide (Attenuator peptide).
     PHEL OR PHEAE OR B2598 OR SF2658 OR S4807.
GN
OS
     Escherichia coli, and
OS
     Shigella flexneri.
OC
     Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales;
OC
     Enterobacteriaceae; Escherichia.
OX
     NCBI TaxID=562, 623;
RN
     [1]
RP
     SEQUENCE FROM N.A.
RC
     SPECIES=E.coli;
     MEDLINE=79033820; PubMed=360214;
RX
     Zurawski G., Brown K., Killingly D., Yanofsky C.;
RA
RT
     "Nucleotide sequence of the leader region of the phenylalanine operon
RT
     of Escherichia coli.";
RL
     Proc. Natl. Acad. Sci. U.S.A. 75:4271-4275(1978).
RN
     [2]
RP
     SEQUENCE FROM N.A.
RC
     SPECIES=E.coli;
RX
     MEDLINE=91072346; PubMed=2254312;
     Gavini N., Davidson B.E.;
RA
RT
     "pheAo mutants of Escherichia coli have a defective pheA attenuator.";
RL
     J. Biol. Chem. 265:21532-21535(1990).
RN
     [3]
RP
     SEQUENCE FROM N.A.
RC
     SPECIES=E.coli; STRAIN=K12 / MG1655;
RX
     MEDLINE=97426617; PubMed=9278503;
RA
     Blattner F.R., Plunkett G. III, Bloch C.A., Perna N.T., Burland V.,
RA
     Riley M., Collado-Vides J., Glasner J.D., Rode C.K., Mayhew G.F.,
RA
     Gregor J., Davis N.W., Kirkpatrick H.A., Goeden M.A., Rose D.J.,
```

```
Mau B., Shao Y.;
RA
    "The complete genome sequence of Escherichia coli K-12.";
RT
    Science 277:1453-1474(1997).
RL
RN
    SEQUENCE FROM N.A.
RP
    SPECIES=S.flexneri; STRAIN=301 / Serotype 2a;
RC
    MEDLINE=22272406; PubMed=12384590;
RX
    Jin Q., Yuan Z., Xu J., Wang Y., Shen Y., Lu W., Wang J., Liu H.,
RA
RA
    Yang J., Yang F., Zhang X., Zhang J., Yang G., Wu H., Qu D., Dong J.,
RΑ
    Sun L., Xue Y., Zhao A., Gao Y., Zhu J., Kan B., Ding K., Chen S.,
    Cheng H., Yao Z., He B., Chen R., Ma D., Qiang B., Wen Y., Hou Y.,
RA
RA
RT
    "Genome sequence of Shigella flexneri 2a: insights into pathogenicity
RT
    through comparison with genomes of Escherichia coli K12 and O157.";
    Nucleic Acids Res. 30:4432-4441(2002).
RL
RN
    [5]
RP
    SEQUENCE FROM N.A.
    SPECIES=S.flexneri; STRAIN=2457T / ATCC 700930 / Serotype 2a;
RC
    MEDLINE=22590274; PubMed=12704152;
RX
    Wei J., Goldberg M.B., Burland V., Venkatesan M.M., Deng W.,
RA
    Fournier G., Mayhew G.F., Plunkett G. III, Rose D.J., Darling A.,
RA
    Mau B., Perna N.T., Payne S.M., Runyen-Janecky L.J., Zhou S.,
RA
    Schwartz D.C., Blattner F.R.;
RA
    "Complete genome sequence and comparative genomics of Shigella
RT
RT
    flexneri serotype 2a strain 2457T.";
RL
    Infect. Immun. 71:2775-2786(2003).
CC
    -!- FUNCTION: THIS PROTEIN IS INVOLVED IN CONTROL OF THE BIOSYNTHESIS
CC
        OF PHENYLALANINE.
CC
    ______
CC
    This SWISS-PROT entry is copyright. It is produced through a collaboration
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    between the Swiss Institute of Bioinformatics and the EMBL outstation -
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    the European Bioinformatics Institute. There are no restrictions on its
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    or send an email to license@isb-sib.ch).
CC
    ______
DR
    EMBL; V00314; CAA23600.1; -.
DR
    EMBL; M10431; AAA24329.1; -.
    EMBL; M58024; AAA62783.1; -.
DR
    EMBL; AE000346; AAC75647.1; -.
DR
    EMBL; AE015281; AAN44154.1; -.
DR
DR
    EMBL; AE016987; AAP17979.1; -.
DR
    PIR; A03593; LFECF.
DR
    EcoGene; EG11271; pheL.
KW
    Leader peptide; Complete proteome.
SQ
    SEQUENCE 15 AA; 1924 MW; CFE14AE3BFF935E0 CRC64;
 Query Match
                        37.5%; Score 18; DB 1; Length 15;
 Best Local Similarity 40.0%; Pred. No. 1.5e+03;
 Matches
            2; Conservative
                             2; Mismatches 1; Indels
                                                             0; Gaps
                                                                         0;
Qу
           4 YVPLF 8
             ::| |
Db
           3 HIPFF 7
```

```
RESULT 17
UC17 MAIZE
ID
     UC17 MAIZE
                    STANDARD;
                                   PRT:
                                            15 AA.
AC
     P80623;
     01-OCT-1996 (Rel. 34, Created)
DΤ
     01-OCT-1996 (Rel. 34, Last sequence update)
DT
     15-MAR-2004 (Rel. 43, Last annotation update)
DΤ
     Unknown protein from 2D-page of etiolated coleoptile (Spot 32)
DE
     (Fragment).
DΕ
OS
     Zea mays (Maize).
     Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
OC
OC
     Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;
OC
     PACCAD clade; Panicoideae; Andropogoneae; Zea.
OX
     NCBI TaxID=4577;
RN
     [1]
RP
     SEQUENCE.
RC
     TISSUE=Coleoptile;
     Touzet P., Riccardi F., Morin C., Damerval C., Huet J.-C.,
RA
RA
     Pernollet J.-C., Zivy M., de Vienne D.;
RT
     "The maize two dimensional gel protein database: towards an integrated
     genome analysis program.";
RT
RL
     Theor. Appl. Genet. 93:997-1005(1996).
CC
     -!- MISCELLANEOUS: On the 2D-gel the determined pI of this unknown
CC
         protein is: 5.5, its MW is: 42.7 kDa.
     Maize-2DPAGE; P80623; COLEOPTILE.
DR
DR
     MaizeDB; 123949; -.
FT
     NON TER
                   1
                          1
                  15
                         15
FT
     NON TER
SO
     SEQUENCE
                15 AA; 1554 MW;
                                  COAFFF15FFECEEC8 CRC64;
 Query Match
                          37.5%;
                                  Score 18; DB 1; Length 15;
                          75.0%; Pred. No. 1.5e+03;
 Best Local Similarity
 Matches
             3; Conservative
                                 1; Mismatches
                                                    0; Indels
                                                                   0; Gaps
                                                                               0;
Qy
            5 VPLF 8
              ||:|
            4 VPVF 7
Db
RESULT 18
UC30 MAIZE
     UC30 MAIZE
                    STANDARD;
                                   PRT;
                                            15 AA.
ΤD
AC
     P80636;
DT
     01-OCT-1996 (Rel. 34, Created)
DT
     01-OCT-1996 (Rel. 34, Last sequence update)
DT
     15-MAR-2004 (Rel. 43, Last annotation update)
DE
     Unknown protein from 2D-page of etiolated coleoptile (Spot 662)
DΕ
     (Fragment).
OS
     Zea mays (Maize).
     Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
OC
OC
     Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;
     PACCAD clade; Panicoideae; Andropogoneae; Zea.
OC
     NCBI TaxID=4577;
OX
RN
     [1]
RP
     SEOUENCE.
RC
     TISSUE=Coleoptile;
     Touzet P., Riccardi F., Morin C., Damerval C., Huet J.-C.,
RA
```

```
Pernollet J.-C., Zivy M., de Vienne D.;
RA
     "The maize two dimensional gel protein database: towards an integrated
RT
     genome analysis program.";
RT
     Theor. Appl. Genet. 93:997-1005(1996).
RL
     -!- MISCELLANEOUS: On the 2D-gel the determined pI of this unknown
CC
CC
         protein is: 4.9, its MW is: 32.3 kDa.
DR
     Maize-2DPAGE; P80636; COLEOPTILE.
DR
     MaizeDB; 123961; -.
FT
     NON TER
                   1
FT
     NON TER
                  15
                         15
     SEQUENCE
                15 AA; 1545 MW; 3485190F4EF38018 CRC64;
SO
  Query Match
                          37.5%;
                                  Score 18; DB 1; Length 15;
                         75.0%;
                                  Pred. No. 1.5e+03;
  Best Local Similarity
  Matches
             3; Conservative 0; Mismatches
                                                 1; Indels
                                                                 0; Gaps
                                                                              0;
            6 PLFP 9
Qу
              \Box
            5 PLLP 8
Dh
RESULT 19
RM35 YEAST
     RM35 YEAST
ΙD
                    STANDARD;
                                   PRT;
                                           17 AA.
AC
     P36530;
DT
     01-JUN-1994 (Rel. 29, Created)
DT
     01-JUN-1994 (Rel. 29, Last sequence update)
     01-JUN-1994 (Rel. 29, Last annotation update)
DT
DE
     Mitochondrial 60S ribosomal protein L35 (YmL35) (Fragment).
GN
os
     Saccharomyces cerevisiae (Baker's yeast).
OC
     Eukaryota; Fungi; Ascomycota; Saccharomycotina; Saccharomycetes;
OC
     Saccharomycetales; Saccharomycetaceae; Saccharomyces.
OX
     NCBI TaxID=4932;
RN
     [1]
RP
     SEQUENCE.
RX
     MEDLINE=91285106; PubMed=2060626;
     Grohmann L., Graack H.-R., Kruft V., Choli T., Goldschmidt-Reisin S.,
RA
     Kitakawa M.;
RA
RT
     "Extended N-terminal sequencing of proteins of the large ribosomal
RT
     subunit from yeast mitochondria.";
RL
     FEBS Lett. 284:51-56(1991).
DR
     PIR; S17274; S17274.
DR
     GermOnline; 140814; -.
DR
     SGD; S0002730; MRPL35.
KW
     Ribosomal protein; Mitochondrion.
FT
     NON TER
                  17
                         17
SO
     SEQUENCE
                17 AA; 1826 MW; 6CE89CB415483EE8 CRC64;
  Query Match
                          37.5%;
                                  Score 18; DB 1; Length 17;
                         50.0%; Pred. No. 1.7e+03;
  Best Local Similarity
                                 2; Mismatches
 Matches
             2; Conservative
                                                   0; Indels
                                                                 0; Gaps
                                                                              0;
Qу
            6 PLFP 9
              1::1
           12 PVYP 15
Db
```

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RESULT 20
FIBB ANAPL
     FIBB ANAPL
ID
                    STANDARD;
                                    PRT;
                                            18 AA.
AC
     P12802;
DT
     01-OCT-1989 (Rel. 12, Created)
DΤ
     01-OCT-1989 (Rel. 12, Last sequence update)
     10-OCT-2003 (Rel. 42, Last annotation update)
DT
DE
     Fibrinogen beta chain [Contains: Fibrinopeptide B] (Fragment).
GN
OS
     Anas platyrhynchos (Domestic duck).
OC
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
     Archosauria; Aves; Neognathae; Anseriformes; Anatidae; Anas.
OX
     NCBI TaxID=8839;
RN
     [1]
RP
     SEQUENCE.
RX
     MEDLINE=85168193; PubMed=3983613;
RA.
     Min Y., Ping Z., Yaoshi Z.;
RT
     "Purification and primary structures of duck fibrinopeptides A and
     B.";
RT
RL
     Sci. Sin., Ser. B, Chem. Biol. Agric. Med. Earth Sci. 28:31-35(1985).
     -!- FUNCTION: Fibrinogen has a double function: yielding monomers that
CC
CC
         polymerize into fibrin and acting as a cofactor in platelet
CC
         aggregation.
     -!- SUBUNIT: HEXAMER CONTAINING 2 SETS OF 3 NONIDENTICAL CHAINS
CC
         (ALPHA, BETA AND GAMMA), LINKED TO EACH OTHER BY DISULFIDE BONDS.
CC
CC
     -!- PTM: Conversion of fibrinogen to fibrin is triggered by thrombin,
         which cleaves fibrinopeptides A and B from alpha and beta chains,
CC
CC
         and thus exposes the N-terminal polymerization sites responsible
         for the formation of the soft clot.
CC
DR
     PIR; JP0102; JP0102.
DR
     InterPro; IPR002181; Fibrinogen C.
DR
     PROSITE; PS00514; FIBRIN AG C DOMAIN; PARTIAL.
KW
     Blood coagulation; Plasma; Sulfation; Pyrrolidone carboxylic acid.
FT
     PEPTIDE
                   1
                         18
                                   FIBRINOPEPTIDE B.
FT
     MOD RES
                   1
                          1
                                   PYRROLIDONE CARBOXYLIC ACID.
FT
     MOD RES
                   6
                          6
                                   SULFATION.
FT
     NON TER
                  18
                         18
     SEQUENCE
                18 AA; 2028 MW; B0F15E7768F8A1F9 CRC64;
SO
  Query Match
                          37.5%;
                                  Score 18; DB 1; Length 18;
                          80.0%; Pred. No. 1.8e+03;
  Best Local Similarity
 Matches
                                 0; Mismatches
             4; Conservative
                                                    1; Indels
                                                                   0; Gaps
                                                                               0;
            2 ESYVP 6
Qу
              11 ESTVP 15
RESULT 21
UPA7 HUMAN
     UPA7 HUMAN
                                    PRT;
                                             9 AA.
ΙD
                    STANDARD;
AC
     P30093;
DT
     01-APR-1993 (Rel. 25, Created)
DT
     01-APR-1993 (Rel. 25, Last sequence update)
     15-MAR-2004 (Rel. 43, Last annotation update)
DT
DF.
     Unknown protein from 2D-page of plasma (Spot 18) (Fragment).
```

```
OS
     Homo sapiens (Human).
OC
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
    Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
     NCBI TaxID=9606;
OX
RN
     [1]
     SEQUENCE.
RP
RC
     TISSUE=Plasma;
    MEDLINE=93092937; PubMed=1459097;
RX
     Hughes G.J., Frutiger S., Paquet N., Ravier F., Pasquali C.,
RA
     Sanchez J.-C., James R., Tissot J.-D., Bjellqvist B.,
RA
RA
     Hochstrasser D.F.;
     "Plasma protein map: an update by microsequencing.";
RT
RL
     Electrophoresis 13:707-714(1992).
CC
     -!- MISCELLANEOUS: On the 2D-gel the determined pI of this unknown
         protein is: 5.05, its MW is: 37 kDa.
CC
     SWISS-2DPAGE; P30093; HUMAN.
DR
FT
     NON TER
                   1
                          1
    UNSURE
FT
                   5
                          5
     NON TER
                   9
                          9
FT
                9 AA; 1042 MW; 5C14477AEB0772C7 CRC64;
SQ
     SEQUENCE
                          35.4%; Score 17; DB 1; Length 9;
  Query Match
                          57.1%; Pred. No. 1.4e+05;
  Best Local Similarity
 Matches
             4; Conservative
                                 0; Mismatches
                                                    3; Indels
                                                                  0; Gaps
                                                                              0;
            3 SYVPLFP 9
Qу
              1 11 1
            1 SLVPEXP 7
Db
RESULT 22
TM2A METMA
ID
     TM2A METMA
                    STANDARD;
                                   PRT;
                                           12 AA.
AC
     P80652;
DT
     01-OCT-1996 (Rel. 34, Created)
DT
     01-OCT-1996 (Rel. 34, Last sequence update)
DT
     16-OCT-2001 (Rel. 40, Last annotation update)
DE
     Alternative tetrahydromethanopterin S-methyltransferase 28 kDa subunit
DE
     (EC 2.1.1.86) (N5-methyltetrahydromethanopterin--coenzyme M
DE
    methyltransferase 28 kDa subunit) (Fragment).
OS
    Methanosarcina mazei (Methanosarcina frisia).
OC
     Archaea; Euryarchaeota; Methanomicrobia; Methanosarcinales;
OC
    Methanosarcinaceae; Methanosarcina.
OX
    NCBI TaxID=2209;
RN
     [1]
RP
     SEQUENCE.
     STRAIN=Goel / Gol / ATCC BAA-199 / DSM 3647 / OCM 88;
RC
    MEDLINE=96370840; PubMed=8774736;
RX
RA
     Lienard T., Becher B., Marschall M., Bowien S., Gottschalk G.;
RT
     "Sodium ion translocation by N5-methyltetrahydromethanopterin:
RT
     coenzyme M methyltransferase from Methanosarcina mazei Gol
RT
     reconstituted in ether lipid liposomes.";
RL
     Eur. J. Biochem. 239:857-864(1996).
CC
     -!- FUNCTION: THIS ENZYME COMPLEX CATALYZES AN INTERMEDIATE STEP IN
CC
         METHANOGENESIS, THE FORMATION OF METHYL-COENZYME M AND
CC
         TETRAHYDROMETHANOPTERIN FROM COENZYME M AND N5-METHYL-
CC
         TETRAHYDROMETHANOPTERIN.
```

```
CC
     -!- CATALYTIC ACTIVITY: 5-methyl-5,6,7,8-tetrahydromethanopterin + 2-
CC
         mercaptoethanesulfonate = 5,6,7,8-tetrahydromethanopterin + 2-
CC
         (methylthio) ethanesulfonate.
     -!- SUBUNIT: COMPOSED OF SIX DIFFERENT SUBUNITS.
CC
    -!- SUBCELLULAR LOCATION: Integral membrane protein.
CC
     Transferase; Methyltransferase; Transmembrane; Methanogenesis.
KW
FT
    NON TER
                  12
                         12
     SEQUENCE
                12 AA; 1321 MW; 6DE4A5766232D76B CRC64;
SQ
  Query Match
                          35.4%; Score 17; DB 1; Length 12;
                          37.5%; Pred. No. 1.9e+03;
  Best Local Similarity
                                                                              0;
 Matches
            3; Conservative
                                 1; Mismatches
                                                   4; Indels
                                                                  0; Gaps
            2 ESYVPLFP 9
Qу
              | |: |
            2 EKLEPVLP 9
Db
RESULT 23
APID BOMPA
    APID BOMPA
                    STANDARD;
                                   PRT;
                                           17 AA.
ID
     P81464;
AC
DT
     15-DEC-1998 (Rel. 37, Created)
     15-DEC-1998 (Rel. 37, Last sequence update)
DT
     10-OCT-2003 (Rel. 42, Last annotation update)
DT
DE
     Apidaecin.
OS
     Bombus pascuorum (Brown bumble bee).
     Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
OC
     Neoptera; Endopteryqota; Hymenoptera; Apocrita; Aculeata; Apoidea;
OC
OC
     Apidae; Bombus.
OX
    NCBI TaxID=65598;
RN
     [1]
RP
     SEQUENCE.
RC
     TISSUE=Hemolymph;
RX
    MEDLINE=97362903; PubMed=9219367;
RA
     Rees J.A., Moniatte M., Bulet P.;
RT
     "Novel antibacterial peptides isolated from a European bumblebee,
RT
     Bombus pascuorum (Hymenoptera, Apoidea).";
     Insect Biochem. Mol. Biol. 27:413-422(1997).
RL
CC
     -!- FUNCTION: Antibacterial peptide active against Gram-negative
CC
         bacteria.
     -!- INDUCTION: By bacterial infection.
CC
     InterPro; IPR004828; Apidaecin.
DR
     Pfam; PF00807; Apidaecin; 1.
DR
     Insect immunity; Antibiotic; Hemolymph.
KW
                17 AA; 1963 MW; CD1D0D02C8BC23D1 CRC64;
SQ
     SEQUENCE
                          35.4%; Score 17; DB 1; Length 17;
  Query Match
                                 Pred. No. 2.7e+03;
  Best Local Similarity
                          66.7%;
                                                                              0;
  Matches
             2; Conservative
                                 1; Mismatches
                                                   0; Indels
                                                                  0; Gaps
            4 YVP 6
Qy
              1:1
```

6 YIP 8

```
LPK2 LOCMI
                                            10 AA.
     LPK2 LOCMI
                    STANDARD;
                                    PRT;
ID
AC
     P41488:
     01-NOV-1995 (Rel. 32, Created)
DT
     01-NOV-1995 (Rel. 32, Last sequence update)
DT
     28-FEB-2003 (Rel. 41, Last annotation update)
DT
     Locustapyrokinin 2 (LOM-PK-2) (FXPRL-amide).
DE
     Locusta migratoria (Migratory locust).
OS
     Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
OC
     Neoptera; Orthopteroidea; Orthoptera; Caelifera; Acridomorpha;
OC
     Acridoidea; Acrididae; Oedipodinae; Locusta.
OC
     NCBI TaxID=7004;
OX
RN
     [1]
     SEQUENCE.
RP
     TISSUE=Brain;
RC
     MEDLINE=94094539; PubMed=7903606;
RX
     Schoofs L., Holman G.M., Nachman R., Proost P., van Damme J.,
RA
     de Loof A.;
RA
     "Isolation, identification and synthesis of locustapyrokinin II from
RT
     Locusta migratoria, another member of the FXPRL-amide peptide
RT
RT
     Comp. Biochem. Physiol. 106C:103-109(1993).
RL
     -!- FUNCTION: Mediates visceral muscle contractile activity (myotropic
CC
CC
         activity).
     -!- SIMILARITY: Belongs to the pyrokinin family.
CC
     InterPro; IPR001484; Pyrokinin.
DR
     PROSITE; PS00539; PYROKININ; 1.
DR
     Neuropeptide; Amidation; Pyrokinin; Pyrrolidone carboxylic acid.
KW
                                   PYRROLIDONE CARBOXYLIC ACID.
FT
     MOD RES
                   1
                          1
     MOD RES
                  10
                         10
                                   AMIDATION.
FT
     SEOUENCE
                10 AA; 1145 MW;
                                   CFAF4271A9D1B772 CRC64;
SQ
  Query Match
                           33.3%;
                                   Score 16; DB 1; Length 10;
                                  Pred. No. 2.4e+03;
  Best Local Similarity
                          75.0%;
                                  0; Mismatches
  Matches
             3; Conservative
                                                    1; Indels
                                                                   0; Gaps
                                                                                0;
Qу
            5 VPLF 8
              \perp \perp \perp
            3 VPTF 6
Db
RESULT 25
TKNB ONCMY
     TKNB ONCMY
                    STANDARD;
                                    PRT;
                                            10 AA.
ID
AC
     P28500;
DT
     01-DEC-1992 (Rel. 24, Created)
     01-DEC-1992 (Rel. 24, Last sequence update)
DΤ
     10-OCT-2003 (Rel. 42, Last annotation update)
DT
     Neurokinin A (Substance K) (Neuromedin L).
DΕ
     Oncorhynchus mykiss (Rainbow trout) (Salmo gairdneri), and
OS
     Gadus morhua (Atlantic cod).
OS
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
     Actinopterygii; Neopterygii; Teleostei; Euteleostei;
OC
OC
     Protacanthopteryqii; Salmoniformes; Salmonidae; Oncorhynchus.
OX
     NCBI TaxID=8022, 8049;
RN
     [1]
RP
     SEQUENCE.
```

```
SPECIES=O.mykiss, and G.morhua;
RC
RC
    TISSUE=Brain;
    MEDLINE=92298992; PubMed=1376687;
RX
     Jensen J., Conlon J.M.;
RA
     "Substance-P-related and neurokinin-A-related peptides from the brain
RT
     of the cod and trout.";
RT
     Eur. J. Biochem. 206:659-664(1992).
RL
     -!- FUNCTION: Tachykinins are active peptides which excite neurons,
CC
         evoke behavioral responses, are potent vasodilators and
CC
         secretagogues, and contract (directly or indirectly) many smooth
CC
         muscles.
CC
     -!- SUBCELLULAR LOCATION: Secreted.
CC
     -!- SIMILARITY: Belongs to the tachykinin family.
CC
     PIR; S23186; S23186.
DR
     PIR; S23307; S23307.
DR
     InterPro; IPR002040; Tachy Neurokinin.
DR
     Pfam; PF02202; Tachykinin; 1.
DR
     PROSITE; PS00267; TACHYKININ; 1.
DR
     Tachykinin; Neuropeptide; Amidation.
KW
                                  AMIDATION (BY SIMILARITY).
     MOD RES
                  10
                        10
FT
                10 AA; 1145 MW; 136B4062C9D5B440 CRC64;
     SEQUENCE
SQ
                          33.3%; Score 16; DB 1; Length 10;
  Query Match
                          42.9%; Pred. No. 2.4e+03;
  Best Local Similarity
                                                                  0; Gaps
                                                                              0;
            3; Conservative
                                 2; Mismatches 2; Indels
  Matches
            1 VESYVPL 7
Qу
              : |:| |
            3 INSFVGL 9
RESULT 26
TKND RANCA
ID
     TKND RANCA
                    STANDARD;
                                   PRT;
                                            11 AA.
AC
     P22691;
DT
     01-AUG-1991 (Rel. 19, Created)
DT
     01-AUG-1991 (Rel. 19, Last sequence update)
DT
     10-OCT-2003 (Rel. 42, Last annotation update)
DE
     Ranatachykinin D (RTK D).
     Rana catesbeiana (Bull frog).
OS
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
     Amphibia; Batrachia; Anura; Neobatrachia; Ranoidea; Ranidae; Rana.
OC
OX
     NCBI TaxID=8400;
RN
     [1]
RP
     SEQUENCE, AND SYNTHESIS.
RC
     TISSUE=Intestine;
     MEDLINE=91254337; PubMed=2043143;
RX
     Kozawa H., Hino J., Minamino N., Kangawa K., Matsuo H.;
RA
     "Isolation of four novel tachykinins from frog (Rana catesbeiana)
RT
RT
     brain and intestine.";
     Biochem. Biophys. Res. Commun. 177:588-595(1991).
RL
RN
     [2]
RP
     SEQUENCE.
RC
     TISSUE=Intestine;
RX
     MEDLINE=94023216; PubMed=8210506;
     Kangawa K., Kozawa H., Hino J., Minamino N., Matsuo H.;
RA
     "Four novel tachykinins in frog (Rana catesbeiana) brain and
```

```
RT
    intestine.";
    Regul. Pept. 46:81-88(1993).
RL
     -!- FUNCTION: Tachykinins are active peptides which excite neurons,
CC
         evoke behavioral responses, are potent vasodilators and
CC
CC
         secretagogues, and contract (directly or indirectly) many smooth
CC
        muscles.
    -!- SUBCELLULAR LOCATION: Secreted.
CC
    -!- SIMILARITY: Belongs to the tachykinin family.
CC
    PIR; D61033; D61033.
DR
    InterPro; IPR002040; Tachy Neurokinin.
DR
    PROSITE; PS00267; TACHYKININ; FALSE NEG.
DR
KW
    Tachykinin; Neuropeptide; Amidation.
                                  AMIDATION.
FT
    MOD RES
                  11
                         11
    SEQUENCE
                11 AA; 1350 MW; 3A34256C59D40B07 CRC64;
SQ
                                  Score 16; DB 1; Length 11;
  Query Match
                          33.3%;
                          50.0%; Pred. No. 2.7e+03;
  Best Local Similarity
             2; Conservative
                                                                  0; Gaps
                                                                               0;
                                 1; Mismatches
                                                    1; Indels
 Matches
            4 YVPL 7
Qy
              1 1:
            8 YAPM 11
Db
RESULT 27
GRAR RANRU
                                   PRT;
                                            12 AA.
     GRAR RANRU
                    STANDARD;
ID
AC
     P40754;
     01-FEB-1995 (Rel. 31, Created)
DT
     01-FEB-1995 (Rel. 31, Last sequence update)
DT
     10-OCT-2003 (Rel. 42, Last annotation update)
DT
DE
     Granuliberin-R.
OS
     Rana rugosa (Wrinkled frog).
OC
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
     Amphibia; Batrachia; Anura; Neobatrachia; Ranoidea; Ranidae; Rana.
OC
OX
     NCBI TaxID=8410;
RN
     [1]
RP
     SEQUENCE.
RC
     TISSUE=Skin secretion;
RX
     MEDLINE=78062810; PubMed=589733;
RA
     Nakajima T., Yasuhara T.;
     "A new mast cell degranulating peptide, granuliberin-R, in the frog
RT
RT
     (Rana rugosa) skin.";
     Chem. Pharm. Bull. 25:2464-2465(1977).
RL
RN
RP
     SYNTHESIS.
RX
     MEDLINE=78189201; PubMed=657408;
     Nakajima T., Yasuhara T., Hirai Y., Kitada C., Fujino M., Takeyama M.,
RA
RA
     Koyama K., Yajima H.;
     "Synthesis of the dodecapeptide amide corresponding to the entire
RT
     amino acid sequence of granuliberin-R, a new frog skin peptide from
RT
RT
     Rana rugosa.";
RL
     Chem. Pharm. Bull. 26:1222-1230(1978).
CC
     -!- FUNCTION: Mast cell degranulating peptide.
CC
     -!- SUBCELLULAR LOCATION: Secreted.
CC
     -!- TISSUE SPECIFICITY: Skin.
     Amphibian defense peptide; Mast cell degranulation; Amidation.
```

```
12
                        12
                                 AMIDATION.
FΤ
    MOD RES
               12 AA; 1424 MW; 2B974EB9CA1B5047 CRC64;
    SEOUENCE
SO
                         33.3%; Score 16; DB 1; Length 12;
 Best Local Similarity 20.0%; Pred. No. 2.9e+03;
                                                                0; Gaps
                                                                            0;
                               4; Mismatches 0; Indels
 Matches
           1; Conservative
           4 YVPLF 8
Qу
             ::|::
           3 FLPIY 7
Πħ
RESULT 28
ADFB TENMO
                                  PRT:
                   STANDARD;
                                          13 AA.
    ADFB TENMO
ID
AC
    P83109;
    10-OCT-2003 (Rel. 42, Created)
DT
    10-OCT-2003 (Rel. 42, Last sequence update)
DT
    10-OCT-2003 (Rel. 42, Last annotation update)
DT
    Antidiuretic factor B (ADFb).
DE
os
    Tenebrio molitor (Yellow mealworm).
    Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
OC
    Neoptera; Endopterygota; Coleoptera; Polyphaga; Cucujiformia;
OC
    Tenebrionidae; Tenebrio.
OC
    NCBI TaxID=7067;
OX
RN
     [1]
     SEQUENCE, FUNCTION, TISSUE SPECIFICITY, MASS SPECTROMETRY, AND
RP
RP
     SYNTHESIS.
    TISSUE=Head;
RC
    MEDLINE=22465067; PubMed=12576082;
RX
     Eigenheer R.A., Wiehart U.M., Nicolson S.W., Schoofs L., Schegg K.M.,
RA
RA
     Hull J.J., Schooley D.A.;
     "Isolation, identification and localization of a second beetle
RT
RT
     antidiuretic peptide.";
     Peptides 24:27-34(2003).
RL
     -!- FUNCTION: Inhibitor of fluid secretion by Malpighian tubules. Uses
CC
CC
         cGMP as second messenger. May function as an antidiuretic
CC
         hormone.
     -!- SUBCELLULAR LOCATION: Secreted.
CC
     -!- TISSUE SPECIFICITY: Brain. Appears to be mainly expressed in two
CC
         pairs of bilaterally symmetrical cells in the protocerebrum.
CC
     -!- MASS SPECTROMETRY: MW=1560.33; METHOD=MALDI.
CC
     Neuropeptide; Hormone.
KW
     SEQUENCE 13 AA; 1562 MW; 0240A4504B8A632B CRC64;
SQ
  Query Match
                          33.3%; Score 16; DB 1; Length 13;
                         75.0%; Pred. No. 3.2e+03;
  Best Local Similarity
                                                                0; Gaps
          3; Conservative
                                0; Mismatches
                                                1; Indels
  Matches
            3 SYVP 6
Qу
              11 1
            5 SYKP 8
Db
RESULT 29
YPE2 LACLC
                  STANDARD; PRT;
ID YPE2 LACLC
                                          13 AA.
```

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P42021;
AC
    01-NOV-1995 (Rel. 32, Created)
DT
    01-NOV-1995 (Rel. 32, Last sequence update)
DT
    16-OCT-2001 (Rel. 40, Last annotation update)
DT
    Hypothetical protein in PEPT 5'region (ORF2) (Fragment).
DE.
    Lactococcus lactis (subsp. cremoris) (Streptococcus cremoris).
OS
    Bacteria; Firmicutes; Lactobacillales; Streptococcaceae; Lactococcus.
OC
    NCBI TaxID=1359;
OX
RN
    [1]
    SEQUENCE FROM N.A.
RP
    MEDLINE=94245610; PubMed=8188586;
RX
    Mierau I., Haandrikman A.J., Velterop O., Tan P.S.T., Leenhouts K.L.,
RA
    Konings W.N., Venema G., Kok J.;
RA
    "Tripeptidase gene (pepT) of Lactococcus lactis: molecular cloning
RT
    and nucleotide sequencing of pepT and construction of a chromosomal
RT
    deletion mutant.";
RT
    J. Bacteriol. 176:2854-2861(1994).
RL
    _____
CC
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    between the Swiss Institute of Bioinformatics and the EMBL outstation -
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    the European Bioinformatics Institute. There are no restrictions on its
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    use by non-profit institutions as long as its content is in no way
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    modified and this statement is not removed. Usage by and for commercial
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    entities requires a license agreement (See http://www.isb-sib.ch/announce/
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    or send an email to license@isb-sib.ch).
CC
    _____
CC
    EMBL; L27596; AAA20625.1; -.
DR
    Hypothetical protein.
KW
    NON TER 1
FT
    SEQUENCE 13 AA; 1392 MW; 3671D53271B459D7 CRC64;
SO
                        33.3%; Score 16; DB 1; Length 13;
 Query Match
 Best Local Similarity 28.6%; Pred. No. 3.2e+03;
 Matches
           2; Conservative 3; Mismatches 2; Indels
                                                           0; Gaps
                                                                        0:
           1 VESYVPL 7
Qу
            :1 :: 1
           4 IEPFISL 10
RESULT 30
HP29 SARPE
    HP29 SARPE
                  STANDARD;
                                PRT;
                                        16 AA.
ID
    P29184;
AC
DT
    01-DEC-1992 (Rel. 24, Created)
    01-DEC-1992 (Rel. 24, Last sequence update)
    28-FEB-2003 (Rel. 41, Last annotation update)
    29 kDa hemocyte proteinase (EC 3.4.22.-) (Fragment).
DΕ
    Sarcophaga peregrina (Flesh fly) (Boettcherisca peregrina).
OS
    Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
OC
    Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha; Oestroidea;
OC
    Sarcophagidae; Sarcophaga.
OC
OX
    NCBI TaxID=7386;
RN
     [1]
RP
    SEQUENCE.
RC
    TISSUE=Pupal hemocytes;
    MEDLINE=92174954; PubMed=1541301;
```

```
Kurata S., Saito H., Natori S.;
RA
    "Purification of a 29-kDa hemocyte proteinase of Sarcophaga
RT
    peregrina.";
RT
    Eur. J. Biochem. 204:911-914(1992).
RL
    -!- FUNCTION: Involved in the dissociation of the larval fat body on
CC
CC
        metamorphosis.
    -!- SIMILARITY: Belongs to peptidase family C1.
CC
    PIR; S21184; S21184.
DR
    InterPro; IPR000169; SHprot_acsite.
DR
    PROSITE; PS00139; THIOL PROTEASE CYS; PARTIAL.
DR
    PROSITE; PS00639; THIOL PROTEASE HIS; PARTIAL.
DR
    PROSITE; PS00640; THIOL PROTEASE ASN; PARTIAL.
DR
    Hydrolase; Thiol protease.
KW
    NON TER
               16
FT
                      16
              16 AA; 1815 MW; F70617AEB1E57351 CRC64;
    SEQUENCE
SQ
                        33.3%; Score 16; DB 1; Length 16;
 Query Match
 Best Local Similarity 60.0%; Pred. No. 4e+03;
         3; Conservative 1; Mismatches 1; Indels 0; Gaps
                                                                        0;
 Matches
          2 ESYVP 6
Qу
            :| |1
          1 DSXVP 5
Db
RESULT 31
VPR HV1S3
                  STANDARD; PRT; 16 AA.
ID VPR HV1S3
    P19555;
AC
    01-FEB-1991 (Rel. 17, Created)
DT
    01-FEB-1991 (Rel. 17, Last sequence update)
DT
    01-JUL-1993 (Rel. 26, Last annotation update)
DT
DΕ
    VPR protein (R ORF protein) (Fragment).
GN
OS
    Human immunodeficiency virus type 1 (SF33 isolate) (HIV-1).
OC
    Viruses; Retroid viruses; Retroviridae; Lentivirus.
OX
    NCBI TaxID=11690;
RN
    [1]
RP
    SEQUENCE FROM N.A.
    MEDLINE=90317906; PubMed=2370688;
RX
    York-Higgins D., Cheng-Mayer C., Bauer D., Levy J.A., Dina D.;
RA
    "Human immunodeficiency virus type 1 cellular host range,
RT
    replication, and cytopathicity are linked to the envelope region of
RT
RT
    the viral genome.";
RL
    J. Virol. 64:4016-4020(1990).
    _____
CC
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CC
    between the Swiss Institute of Bioinformatics and the EMBL outstation -
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    the European Bioinformatics Institute. There are no restrictions on its
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    use by non-profit institutions as long as its content is in no way
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    modified and this statement is not removed. Usage by and for commercial
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    entities requires a license agreement (See http://www.isb-sib.ch/announce/
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    or send an email to license@isb-sib.ch).
CC
    _____
CC
DR
    EMBL; M38427; AAA45066.1; -.
DR
    HIV; M38427; VPR$SF33.
KW
    AIDS.
```

```
FT
     NON TER
                          1
                16 AA; 1786 MW; 0C28AC9630029A56 CRC64;
     SEQUENCE
SQ
                          33.3%; Score 16; DB 1; Length 16;
 Query Match
  Best Local Similarity
                         40.0%; Pred. No. 4e+03;
                                                                             0;
           2; Conservative
                                 3; Mismatches
                                                   0; Indels
                                                                 0; Gaps
            2 ESYVP 6
Qу
              :::||
Db
           11 ONWVP 15
RESULT 32
AHD2_TETPY
     AHD2 TETPY
                    STANDARD;
                                   PRT;
                                           18 AA.
AC
     P35430;
     01-JUN-1994 (Rel. 29, Created)
DT
     01-JUN-1994 (Rel. 29, Last sequence update)
DT
DT
     01-JUN-1994 (Rel. 29, Last annotation update)
DE
     20-alpha-hydroxysteroid dehydrogenase (EC 1.1.1.149) (20-alpha-HSD)
DE
     (Fragment).
OS
     Tetrahymena pyriformis.
OC
     Eukaryota; Alveolata; Ciliophora; Oligohymenophorea; Hymenostomatida;
     Tetrahymenina; Tetrahymena.
OC
OX
     NCBI TaxID=5908;
RN
     [1]
RP
     SEQUENCE, AND CHARACTERIZATION.
     STRAIN=W;
RC
RX
     MEDLINE=94107273; PubMed=8280099;
     Inazu A., Sato K., Nakayama Y., Hara A., Nozawa Y.;
RT
     "Purification and characterization of a novel dimeric 20 alpha-
     hydroxysteroid dehydrogenase from Tetrahymena pyriformis.";
RT
     Biochem. J. 297:195-200(1994).
RL
CC
     -!- FUNCTION: Specific for the oxidation of the 20-alpha hydroxy
CC
         group of 17-alpha-hydroxyprogesterone and 17-alpha-
CC
         hydroxypregnenolone.
     -!- CATALYTIC ACTIVITY: 17-alpha, 20-alpha-dihydroxypregn-4-en-3-one +
CC
         NAD(P)(+) = 17-alpha-hydroxyprogesterone + NAD(P)H.
CC
CC
     -!- SUBUNIT: Homodimer.
DR
     PIR: S40502; S40502.
KW
     Oxidoreductase; NADP.
     NON TER
FT
                         18
                 18
                18 AA; 1861 MW; 16DF6B287E3B0A0D CRC64;
SQ
     SEQUENCE
                          32.3%;
                                  Score 15.5; DB 1; Length 18;
  Query Match
                          50.0%;
                                  Pred. No. 5.6e+03;
  Best Local Similarity
             5; Conservative
                                 0; Mismatches
                                                0; Indels
                                                                 5;
                                                                     Gaps
                                                                             1;
            5 VPL----FP 9
Qу
              \Pi\Pi
                      5 VPLNDGTNFP 14
RESULT 33
ALL6 CYDPO
     ALL6 CYDPO
                                   PRT;
                                            8 AA.
ID
                    STANDARD;
     P82157;
AC
```

```
DT
     30-MAY-2000 (Rel. 39, Created)
     30-MAY-2000 (Rel. 39, Last sequence update)
DT
DT
     30-MAY-2000 (Rel. 39, Last annotation update)
DE
     Cydiastatin 6.
     Cydia pomonella (Codling moth).
OS
OC
     Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
    Neoptera; Endopterygota; Lepidoptera; Glossata; Ditrysia;
OC
    Tortricoidea; Tortricidae; Olethreutinae; Cydia.
OC
OX
     NCBI TaxID=82600;
RN
     [1]
     SEQUENCE.
RP
RC
    TISSUE=Larva;
    MEDLINE=98054539; PubMed=9392829;
RA
     Duve H., Johnsen A.H., Maestro J.-L., Scott A.G., Winstanley D.,
     Davey M., East P.D., Thorpe A.;
RA
     "Lepidopteran peptides of the allatostatin superfamily.";
RT
RL
     Peptides 18:1301-1309(1997).
     -!- SIMILARITY: Belongs to the allatostatin family.
CC
KW
     Neuropeptide; Amidation.
FT
    MOD RES
                   8
                                  AMIDATION.
                8 AA; 936 MW; 0B2879C45B573767 CRC64;
SQ
     SEQUENCE
  Query Match
                          31.2%; Score 15; DB 1; Length 8;
                          50.0%; Pred. No. 1.4e+05;
  Best Local Similarity
                                                                  0; Gaps
                                                                              0;
 Matches
            2; Conservative
                                2; Mismatches
                                                   0; Indels
            5 VPLF 8
Qу
              :||:
Db
            1 LPLY 4
RESULT 34
PPK3 PERAM
ID
     PPK3 PERAM
                    STANDARD;
                                   PRT;
                                            8 AA.
AC
     P82618;
DT
     16-OCT-2001 (Rel. 40, Created)
DT
     16-OCT-2001 (Rel. 40, Last sequence update)
DT
     16-OCT-2001 (Rel. 40, Last annotation update)
     Pyrokinin-3 (Pea-PK-3) (FXPRL-amide).
DE
     Periplaneta americana (American cockroach).
OS
     Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
OC
     Neoptera; Orthopteroidea; Dictyoptera; Blattaria; Blattoidea;
OC
OC
     Blattidae; Periplaneta.
OX
     NCBI TaxID=6978;
RN
RP
     SEQUENCE, FUNCTION, AND MASS SPECTROMETRY.
RC
     TISSUE=Retrocerebral complex;
     MEDLINE=99212469; PubMed=10196736;
RX
     Predel R., Kellner R., Nachman R.J., Holman G.M., Rapus J., Gaede G.;
RA
     "Differential distribution of pyrokinin-isoforms in cerebral and
RT
RT
     abdominal neurohemal organs of the American cockroach.";
RL
     Insect Biochem. Mol. Biol. 29:139-144(1999).
RN
     [2]
RP
     TISSUE SPECIFICITY.
     MEDLINE=20189894; PubMed=10723010;
RX
RA
     Predel R., Eckert M.;
RT
     "Tagma-specific distribution of FXPRLamides in the nervous system of
```

```
RT
     the American cockroach.";
     J. Comp. Neurol. 419:352-363(2000).
RL
CC
     -!- FUNCTION: Mediates visceral muscle contractile activity (myotropic
CC
         activity).
CC
     -!- TISSUE SPECIFICITY: Corpora cardiaca.
CC
    -!- MASS SPECTROMETRY: MW=996.5; METHOD=MALDI.
    -!- SIMILARITY: Belongs to the pyrokinin family.
CC
    Neuropeptide; Amidation; Pyrokinin.
KW
FT
    MOD RES
                   8
                          8
                                  AMIDATION.
SO
     SEQUENCE
                8 AA; 997 MW; 0B34177409D772C7 CRC64;
                          31.2%; Score 15; DB 1; Length 8;
 Query Match
                          60.0%; Pred. No. 1.4e+05;
 Best Local Similarity
                                 0; Mismatches
                                                  2; Indels
            3; Conservative
         5 VPLFP 9
Qу
              11 1
            2 VPFRP 6
RESULT 35
LMT3 LOCMI
     LMT3 LOCMI
                    STANDARD;
                                   PRT;
                                            9 AA.
TD
AC
     P41489;
     01-NOV-1995 (Rel. 32, Created)
DT
DT
     01-NOV-1995 (Rel. 32, Last sequence update)
DT
     01-NOV-1995 (Rel. 32, Last annotation update)
DE
     Locustamyotropin 3 (LOM-MT-3).
OS
     Locusta migratoria (Migratory locust).
OC
     Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
OC
     Neoptera; Orthopteroidea; Orthoptera; Caelifera; Acridomorpha;
OC
     Acridoidea; Acrididae; Oedipodinae; Locusta.
OX
     NCBI TaxID=7004;
RN
     [1]
RP
     SEQUENCE, AND SYNTHESIS.
RC
     TISSUE=Brain;
     Schoofs L., Holman G.M., Hayes T.K., Nachman R.J., Kochansky J.P.,
RA
RA
     de Loof A.;
RT
     "Isolation, identification and synthesis of locustamyotropin III and
     IV, two additional neuropeptides of Locusta migratoria: members of the
RT
RT
     locustamyotropin peptide family.";
     Insect Biochem. Mol. Biol. 22:447-452(1992).
RL
     -!- FUNCTION: Potent mediator of visceral muscle contractile activity
CC
CC
         (myotropic activity).
     -!- SIMILARITY: Belongs to the pyrokinin family.
CC
DR
     PIR; A61620; A61620.
DR
     InterPro; IPR001484; Pyrokinin.
DR
     PROSITE; PS00539; PYROKININ; 1.
KW
     Neuropeptide; Amidation; Pyrokinin.
FT
     MOD RES
                   9
                          9
                                  AMIDATION.
SQ
     SEQUENCE
                9 AA; 1140 MW; D5AE1772C9D776C6 CRC64;
                          31.2%; Score 15; DB 1; Length 9;
  Query Match
  Best Local Similarity
                          40.0%; Pred. No. 1.4e+05;
                                 2; Mismatches
                                                  1; Indels
                                                                  0; Gaps
  Matches
            2; Conservative
```

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::||
Db 3 QPFVP 7
```

```
RESULT 36
RT02 BOVIN
     RT02 BOVIN
                                   PRT:
                                           10 AA.
                    STANDARD:
     P82923;
AC
DТ
     28-FEB-2003 (Rel. 41, Created)
DТ
     28-FEB-2003 (Rel. 41, Last sequence update)
     28-FEB-2003 (Rel. 41, Last annotation update)
DE
    Mitochondrial 28S ribosomal protein S2 (MRP-S2) (Fragment).
    MRPS2.
GN
OS
     Bos taurus (Bovine).
OC
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
    Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
     Bovidae; Bovinae; Bos.
OC
OX
    NCBI_TaxID=9913;
RN
     [1]
RP
     SEQUENCE.
RC
    TISSUE=Liver;
    MEDLINE=21276436; PubMed=11279123;
RX
RA
     Koc E.C., Burkhart W., Blackburn K., Moseley A., Spremulli L.L.;
     "The small subunit of the mammalian mitochondrial ribosome:
RT
     identification of the full complement of ribosomal proteins present.";
RT
RL
     J. Biol. Chem. 276:19363-19374(2001).
CC
     -!- SUBUNIT: Component of the mitochondrial ribosome small subunit
         (28S) which comprises a 12S rRNA and about 30 distinct proteins.
CC
CC
     -!- SUBCELLULAR LOCATION: Mitochondrial.
CC
     -!- SIMILARITY: Belongs to the S2P family of ribosomal proteins.
DR
     InterPro; IPR001865; Ribosomal S2.
     PROSITE; PS00962; RIBOSOMAL S2 1; PARTIAL.
DR
     Ribosomal protein; Mitochondrion.
KW
FT
     NON TER
                   1
                          1
FT
     NON TER
                  10
                         10
                10 AA; 1246 MW;
     SEQUENCE
                                  6A7A6679C04B476B CRC64;
SO
                          31.2%; Score 15; DB 1; Length 10;
 Query Match
  Best Local Similarity
                          40.0%; Pred. No. 3.8e+03;
 Matches
             2: Conservative
                                 2; Mismatches
                                                   1; Indels
                                                                  0; Gaps
                                                                               0;
            1 VESYV 5
Qу
              : | |:
            2 MEPYI 6
Db
RESULT 37
TKNB CHICK
     TKNB CHICK
                                    PRT;
                                            10 AA.
ID
                    STANDARD;
AC
     P19851;
     01-FEB-1991 (Rel. 17, Created)
DT
     01-FEB-1991 (Rel. 17, Last sequence update)
DT
     10-OCT-2003 (Rel. 42, Last annotation update)
DT
DE
     Neurokinin A (Substance K) (Neuromedin L).
     Gallus gallus (Chicken).
OS
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
     Archosauria; Aves; Neognathae; Galliformes; Phasianidae; Phasianinae;
OC
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OC
     Gallus.
    NCBI TaxID=9031;
OX
RN
     [1]
RP
     SEQUENCE.
RC
    TISSUE=Intestine;
    MEDLINE=88204263; PubMed=2452461;
RX
RA
    Conlon J.M., Katsoulis S., Schmidt W.E., Thim L.;
RT
     "[Arg3] substance P and neurokinin A from chicken small intestine.";
    Regul. Pept. 20:171-180(1988).
RL
    -!- FUNCTION: Tachykinins are active peptides which excite neurons,
CC
CC
         evoke behavioral responses, are potent vasodilators and
CC
         secretagogues, and contract (directly or indirectly) many smooth
CC
         muscles.
CC
    -!- SUBCELLULAR LOCATION: Secreted.
CC
    -!- SIMILARITY: Belongs to the tachykinin family.
DR
    PIR; JN0024; JN0024.
     InterPro; IPR002040; Tachy Neurokinin.
DR
DR
     Pfam; PF02202; Tachykinin; 1.
DR
     PROSITE; PS00267; TACHYKININ; 1.
ΚW
    Tachykinin; Neuropeptide; Amidation.
FT
    MOD RES
                  10
                        10
                                  AMIDATION.
SQ
    SEQUENCE
                10 AA; 1134 MW; 8A6B4062C9D5BAB1 CRC64;
  Query Match
                          31.2%;
                                  Score 15; DB 1; Length 10;
                          50.0%; Pred. No. 3.8e+03;
  Best Local Similarity
 Matches
             3; Conservative
                                 2; Mismatches
                                                   1; Indels
                                                                  0; Gaps
                                                                              0;
            2 ESYVPL 7
Qу
              : | : | |
            4 DSFVGL 9
Db
RESULT 38
TKNB RANRI
ID
    TKNB RANRI
                    STANDARD;
                                   PRT;
                                           10 AA.
     P29135;
AC
DT
     01-DEC-1992 (Rel. 24, Created)
    01-DEC-1992 (Rel. 24, Last sequence update)
DT
DT
    10-OCT-2003 (Rel. 42, Last annotation update)
DE
    Neurokinin A.
OS
    Rana ridibunda (Laughing frog) (Marsh frog).
OC
    Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
    Amphibia; Batrachia; Anura; Neobatrachia; Ranoidea; Ranidae; Rana.
OX
    NCBI TaxID=8406;
RN
     [1]
RP
    SEQUENCE.
RC
    TISSUE=Intestine;
RX
    MEDLINE=93075037; PubMed=1332683;
RA
    Wang Y., Badgery-Parker T., Lovas S., Chartrel N., Vaudry H.,
RA
    Burcher E., Conlon J.M.;
     "Primary structure and receptor-binding properties of a neurokinin A-
RT
RT
     related peptide from frog gut.";
RL
    Biochem. J. 287:827-832(1992).
CC
     -!- FUNCTION: Tachykinins are active peptides which excite neurons,
CC
         evoke behavioral responses, are potent vasodilators and
CC
         secretagogues, and contract (directly or indirectly) many smooth
CC
        muscles.
```

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-!- SUBCELLULAR LOCATION: Secreted.
CC
     -!- SIMILARITY: Belongs to the tachykinin family.
CC
     PIR; S27178; S27178.
DR
     InterPro; IPR002040; Tachy Neurokinin.
DR
     Pfam; PF02202; Tachykinin; 1.
DR
     PROSITE; PS00267; TACHYKININ; 1.
DR
KW
     Tachykinin; Neuropeptide; Amidation.
FT
     MOD RES
                  10
                         10
                                  AMIDATION.
                       1160 MW; 526B407059D5BAA7 CRC64;
SQ
     SEQUENCE
                10 AA;
                          31.2%;
                                  Score 15; DB 1; Length 10;
  Query Match
                          28.6%;
                                  Pred. No. 3.8e+03;
  Best Local Similarity
  Matches
             2; Conservative
                                 4; Mismatches
                                                   1; Indels
                                                                  0; Gaps
                                                                               0;
            1 VESYVPL 7
Qу
              ::|:: |
            3 LDSFIGL 9
Db
RESULT 39
UPA8 HUMAN
     UPA8 HUMAN
                    STANDARD;
                                    PRT;
                                            10 AA.
AC
     P30094;
     01-APR-1993 (Rel. 25, Created)
DT
     01-APR-1993 (Rel. 25, Last sequence update)
DT
     15-MAR-2004 (Rel. 43, Last annotation update)
DΤ
DΕ
     Unknown protein from 2D-page of plasma (Spot 34) (Fragment).
OS
     Homo sapiens (Human).
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
OC
     Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX
     NCBI TaxID=9606;
RN
     [1]
RP
     SEQUENCE.
RC
     TISSUE=Plasma;
RX
     MEDLINE=93092937; PubMed=1459097;
RA
     Hughes G.J., Frutiger S., Paquet N., Ravier F., Pasquali C.,
RA
     Sanchez J.-C., James R., Tissot J.-D., Bjellqvist B.,
RA
     Hochstrasser D.F.;
     "Plasma protein map: an update by microsequencing.";
RT
     Electrophoresis 13:707-714(1992).
RL
     -!- MISCELLANEOUS: On the 2D-gel the determined pI of this unknown
CC
         protein is: 7.2, its MW is: 16 kDa.
CC
     SWISS-2DPAGE; P30094; HUMAN.
DR
FT
     NON TER
                   1
                          1
     VARIANT
                   4
FT
                          Δ
                                   S -> H.
                                   /FTId=VAR 000003.
FT
FT
     NON TER
                  10
                         10
SO
     SEQUENCE
                10 AA; 977 MW;
                                 2EA6E0C77AE325B8 CRC64;
  Query Match
                          31.2%;
                                  Score 15; DB 1; Length 10;
                                  Pred. No. 3.8e+03;
  Best Local Similarity 44.4%;
  Matches
             4; Conservative
                                 0; Mismatches
                                                                  0; Gaps
                                                                               0;
                                                    5; Indels
Qy
            1 VESYVPLFP 9
              I I I I I
Db
            2 VGSKXPAVP 10
```

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RESULT 40
NUDM CANFA
ID
     NUDM CANFA
                    STANDARD;
                                   PRT:
                                           12 AA.
     P54713;
AC
DT
     01-OCT-1996 (Rel. 34, Created)
     01-OCT-1996 (Rel. 34, Last sequence update)
     10-OCT-2003 (Rel. 42, Last annotation update)
DT
     NADH-ubiquinone oxidoreductase 42 kDa subunit (EC 1.6.5.3)
DE
DE
     (EC 1.6.99.3) (Complex I-42KD) (CI-42KD) (Fragment).
GN
     NDUFA10.
OS
     Canis familiaris (Dog).
OC
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
     Mammalia; Eutheria; Carnivora; Fissipedia; Canidae; Canis.
OX
     NCBI TaxID=9615;
RN
     [1]
RP
     SEQUENCE.
RC
     TISSUE=Heart;
RX
     MEDLINE=98163340; PubMed=9504812;
RA
     Dunn M.J., Corbett J.M., Wheeler C.H.;
RT
     "HSC-2DPAGE and the two-dimensional gel electrophoresis database of
RT
     dog heart proteins.";
RL
     Electrophoresis 18:2795-2802(1997).
CC
     -!- FUNCTION: Transfer of electrons from NADH to the respiratory
CC
         chain. The immediate electron acceptor for the enzyme is believed
CC
         to be ubiquinone.
CC
     -!- CATALYTIC ACTIVITY: NADH + ubiquinone = NAD(+) + ubiquinol.
     -!- CATALYTIC ACTIVITY: NADH + acceptor = NAD(+) + reduced acceptor.
CC
     -!- COFACTOR: Binds 1 FAD per subunit.
CC
CC
     -!- SUBUNIT: Mammalian complex I is composed of 45 different subunits.
CC
         This a component of the hydrophobic protein fraction.
     -!- SUBCELLULAR LOCATION: Mitochondrial matrix.
CC
     HSC-2DPAGE; P54713; DOG.
DR
KW
     Oxidoreductase; NAD; Ubiquinone; Flavoprotein; FAD; Mitochondrion.
FT
     NON TER
                12
                         12
     SEQUENCE
               12 AA; 1284 MW; 3CCD4E2B36EDD737 CRC64;
  Query Match
                          31.2%; Score 15; DB 1; Length 12;
  Best Local Similarity
                        75.0%; Pred. No. 4.6e+03;
  Matches
            3; Conservative
                                0; Mismatches
                                                1; Indels
                                                                 0; Gaps
            4 YVPL 7
Qу
              1 11
            3 YGPL 6
Db
RESULT 41
CRBL VESCR
     CRBL VESCR
                    STANDARD;
                                   PRT;
                                           13 AA.
ID
AC
     P01518;
DT
     21-JUL-1986 (Rel. 01, Created)
     21-JUL-1986 (Rel. 01, Last sequence update)
DT
     28-FEB-2003 (Rel. 41, Last annotation update)
DT
DE
     Crabrolin.
     Vespa crabro (European hornet).
OS
OC
     Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
     Neoptera; Endopterygota; Hymenoptera; Apocrita; Aculeata; Vespoidea;
oc
```

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OC
     Vespidae; Vespinae; Vespa.
     NCBI TaxID=7445;
OX
RN
     [1]
RP
     SEQUENCE.
RC
     TISSUE=Venom;
RX
     MEDLINE=84289390; PubMed=6206053;
RA
     Argiolas A., Pisano J.J.;
RT
     "Isolation and characterization of two new peptides, mastoparan C and
RT
     crabrolin, from the venom of the European hornet, Vespa crabro.";
     J. Biol. Chem. 259:10106-10111(1984).
RL
RN
     [2]
RP
     SYNTHESIS, AND ANTIMICROBIAL ACTIVITY.
RX
     MEDLINE=97419326; PubMed=9273892;
RA
     Krishnakumari V., Nagaraj R.;
RT
     "Antimicrobial and hemolytic activities of crabrolin, a 13-residue
RT
     peptide from the venom of the European hornet, Vespa crabro, and its
RT
     analogs.";
RL
     J. Pept. Res. 50:88-93(1997).
CC
     -!- FUNCTION: Mast cell degranulating peptide. Induces the chemotaxis
CC
         of neutrophils. Has antimicrobial and hemolytic activity.
DR
     PIR; A01781; JZVHP1.
KW
     Mast cell degranulation; Chemotaxis; Amidation; Antibiotic.
FT
     MOD RES
                  13
                         13
                                  AMIDATION.
SQ
     SEQUENCE
                13 AA; 1497 MW;
                                  515EF8FCEA8D2407 CRC64;
 Query Match
                          31.2%; Score 15; DB 1; Length 13;
 Best Local Similarity
                          50.0%;
                                  Pred. No. 5e+03;
             2; Conservative
                                 2; Mismatches
                                                    0; Indels
                                                                   0; Gaps
                                                                               0;
            4 YVPL 7
Qу
              ::||
            1 FLPL 4
Db
RESULT 42
HPB9 RANES
ID
     HPB9 RANES
                    STANDARD;
                                   PRT;
                                            13 AA.
AC
     P32416;
DT
     01-OCT-1993 (Rel. 27, Created)
DT
     01-OCT-1993 (Rel. 27, Last sequence update)
     10-OCT-2003 (Rel. 42, Last annotation update)
DT
DE
     Hemolytic protein B9 (Fragment).
OS
     Rana esculenta (Edible frog).
OC
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
     Amphibia; Batrachia; Anura; Neobatrachia; Ranoidea; Ranidae; Rana.
OC
OX
     NCBI TaxID=8401;
RN
     [1]
RP
     SEQUENCE.
RC
     TISSUE=Skin secretion;
RX
     MEDLINE=90198965; PubMed=2317508;
     Simmaco M., de Biase D., Severini C., Aita M., Erspamer G.F.,
RA
     Barra D., Bossa F.;
RA
RT
     "Purification and characterization of bioactive peptides from skin
RT
     extracts of Rana esculenta.";
RL
     Biochim. Biophys. Acta 1033:318-323(1990).
     -!- FUNCTION: Shows hemolytic activity.
CC
CC
     -!- SUBCELLULAR LOCATION: Secreted.
```

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-!- TISSUE SPECIFICITY: Skin.
     PIR: S09019; S09019.
DR
     Amphibian defense peptide; Amidation; Hemolysis.
KW
     MOD RES
FT
                  13
                         13
                                  AMIDATION.
     NON TER
                  13
                         13
FT
                                  C6B41A765DF9287D CRC64;
     SEQUENCE
                13 AA;
                        1402 MW;
SO
  Query Match
                          31.2%;
                                  Score 15; DB 1;
                                                   Length 13;
  Best Local Similarity
                          50.0%; Pred. No. 5e+03;
  Matches
             2; Conservative
                                 2; Mismatches
                                                    0; Indels
                                                                              0;
                                                                  0; Gaps
Qy
            4 YVPL 7
              ::||
Db
            1 FLPL 4
RESULT 43
PSAJ PEA
ΙD
     PSAJ PEA
                    STANDARD;
                                   PRT:
                                            13 AA.
     P17229;
AC
DT
     01-AUG-1990 (Rel. 15, Created)
     01-AUG-1990 (Rel. 15, Last sequence update)
DT
DT
     28-FEB-2003 (Rel. 41, Last annotation update)
DΕ
     Photosystem I reaction center subunit IX (PSI-J) (Fragment).
GN
     PSAJ.
OS
     Pisum sativum (Garden pea).
OG
     Chloroplast.
OC
     Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
     Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; rosids;
OC
OC
     eurosids I; Fabales; Fabaceae; Papilionoideae; Vicieae; Pisum.
OX
     NCBI TaxID=3888;
RN
     [1]
RP
     SEQUENCE.
RX
    MEDLINE=90242987; PubMed=2185953;
     Ikeuchi M., Hirano A., Hiyama T., Inoue Y.;
RA
RT
     "Polypeptide composition of higher plant photosystem I complex.
RT
     Identification of psaI, psaJ and psaK gene products.";
     FEBS Lett. 263:274-278(1990).
RL
CC
     -!- FUNCTION: May help in the organization of the psaE and psaF
CC
         subunits.
CC
     -!- SIMILARITY: Belongs to the psaJ family.
DR
     PIR; S09733; S09733.
    HAMAP; MF 00522; -; 1.
DR
KW
     Chloroplast; Photosystem I; Photosynthesis; Transmembrane.
FT
     TRANSMEM
                   7
                        >13
                                  POTENTIAL.
FT
     NON TER
                  13
                         13
SQ
     SEQUENCE
                13 AA;
                       1516 MW;
                                  9E2E45D11FDE3B41 CRC64;
  Query Match
                          31.2%;
                                  Score 15; DB 1; Length 13;
  Best Local Similarity
                          22.2%; Pred. No. 5e+03;
             2; Conservative
                                 5; Mismatches
                                                                              0;
  Matches
                                                    2; Indels
                                                                  0; Gaps
            1 VESYVPLFP 9
Qу
              :::|: : |
Db
            4 LKTYLXVAP 12
```

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RESULT 44
TEMA RANTE
ID
     TEMA RANTE
                    STANDARD;
                                   PRT;
                                            13 AA.
AC
     P56917;
DT
     30-MAY-2000 (Rel. 39, Created)
     16-OCT-2001 (Rel. 40, Last sequence update)
DT
DT
     10-OCT-2003 (Rel. 42, Last annotation update)
DE
     Temporin A.
OS
     Rana temporaria (European common frog).
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
OC
     Amphibia; Batrachia; Anura; Neobatrachia; Ranoidea; Ranidae; Rana.
OX
     NCBI TaxID=8407;
RN
     [1]
RP
     SEQUENCE, AND SYNTHESIS.
RC
     TISSUE=Skin secretion;
RX
     MEDLINE=97175050; PubMed=9022710;
     Simmaco M., Mignogna G., Canofeni S., Miele R., Mangoni M.L.,
RA
RA
     Barra D.;
RT
     "Temporins, antimicrobial peptides from the European red frog Rana
RT
     temporaria.";
     Eur. J. Biochem. 242:788-792(1996).
RL
     -!- FUNCTION: Has antibacterial activity against Gram-positive
CC
CC
         bacteria.
CC
     -!- SUBCELLULAR LOCATION: Secreted.
     -!- TISSUE SPECIFICITY: Skin.
CC
     -!- SIMILARITY: Belongs to the brevinin family.
CC
KW
     Amphibian defense peptide; Antibiotic; Amidation.
                                  AMIDATION.
FT
     MOD RES
                  13
                         13
     SEQUENCE
                13 AA; 1398 MW; 2653612B9DECD408 CRC64;
SQ
                                  Score 15; DB 1;
  Query Match
                          31.2%;
                                                     Length 13;
  Best Local Similarity
                          50.0%; Pred. No. 5e+03;
                                                                  0; Gaps
 Matches
             2; Conservative
                                 2; Mismatches
                                                    0; Indels
            4 YVPL 7
Qу
              :: | |
Db
            1 FLPL 4
RESULT 45
TEMF RANTE
     TEMF RANTE
                    STANDARD;
                                   PRT;
                                            13 AA.
ID
AC
     P56921;
DT
     30-MAY-2000 (Rel. 39, Created)
     16-OCT-2001 (Rel. 40, Last sequence update)
DT
     10-OCT-2003 (Rel. 42, Last annotation update)
DT
DE
     Temporin F.
OS
     Rana temporaria (European common frog).
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
     Amphibia; Batrachia; Anura; Neobatrachia; Ranoidea; Ranidae; Rana.
OC
OX
     NCBI TaxID=8407;
RN
     [1]
RP
     SEQUENCE.
RC
     TISSUE=Skin secretion;
RX
     MEDLINE=97175050; PubMed=9022710;
     Simmaco M., Mignogna G., Canofeni S., Miele R., Mangoni M.L.,
RA
     Barra D.;
RA
```

```
"Temporins, antimicrobial peptides from the European red frog Rana
RT
     temporaria.";
RT
     Eur. J. Biochem. 242:788-792(1996).
RL
CC
     -!- FUNCTION: Has antibacterial activity against Gram-negative and
CC
         Gram-positive bacteria.
     -!- SUBCELLULAR LOCATION: Secreted.
CC
     -!- TISSUE SPECIFICITY: Skin.
CC
CC
     -!- SIMILARITY: Belongs to the brevinin family.
KW
     Amphibian defense peptide; Antibiotic; Amidation.
                                  AMIDATION.
                         13
FT
     MOD RES
                  13
SO
     SEQUENCE
                13 AA; 1370 MW;
                                  2653612B9DECC338 CRC64;
  Query Match
                          31.2%; Score 15; DB 1; Length 13;
  Best Local Similarity
                          50.0%; Pred. No. 5e+03;
                                                                               0;
             2; Conservative
                                 2; Mismatches
                                                    0; Indels
                                                                  0;
                                                                      Gaps
            4 YVPL 7
Qу
              :: | |
Db
            1 FLPL 4
RESULT 46
CRBL VESOR
     CRBL VESOR
                    STANDARD;
                                    PRT;
                                            14 AA.
ID
AC
     P17236;
     01-AUG-1990 (Rel. 15, Created)
DΤ
     01-AUG-1990 (Rel. 15, Last sequence update)
DT
     28-FEB-2003 (Rel. 41, Last annotation update)
DT
     Histamine releasing peptide II (HR-II).
DΕ
     Vespa orientalis (Oriental hornet).
OS
     Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
OC
     Neoptera; Endopterygota; Hymenoptera; Apocrita; Aculeata; Vespoidea;
OC
OC
     Vespidae; Vespinae; Vespa.
     NCBI TaxID=7447;
OX
RN
     [1]
RP
     SEQUENCE.
     TISSUE=Venom;
RC
     Miroshnikov A.I., Snezhkova L.G., Nazimov I.V., Reshetova O.I.,
RA
RA
     Rozynov B.V., Gushchin I.S.;
     "Structure and properties of histamine releasing peptides from the
RT
     venom of Vespa orientalis hornet.";
RT
RL
     Bioorg. Khim. 7:1467-1477(1981).
     -!- FUNCTION: Mast cell degranulating peptide. Induces the chemotaxis
CC
CC
         of neutrophils.
     PIR; JN0390; JN0390.
DR
     Mast cell degranulation; Chemotaxis; Amidation.
KW
                                  AMIDATION.
FT
     MOD RES
                  14
                         14
                14 AA; 1524 MW; 22015B4A6CEDFD38 CRC64;
SQ
     SEQUENCE
                                  Score 15; DB 1; Length 14;
  Query Match
                          31.2%;
                          50.0%; Pred. No. 5.4e+03;
  Best Local Similarity
                                                                  0; Gaps
                                                                               0;
             2; Conservative
                                  2; Mismatches
                                                    0; Indels
            4 YVPL 7
Qу
              ::11
            1 FLPL 4
Db
```

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RESULT 47
LPK1 LOCMI
ID
     LPK1 LOCMI
                    STANDARD;
                                   PRT;
                                           16 AA.
AC
     P20404;
     01-FEB-1991 (Rel. 17, Created)
DT
     01-FEB-1994 (Rel. 28, Last sequence update)
     28-FEB-2003 (Rel. 41, Last annotation update)
DΤ
     Locustapyrokinin 1 (LOM-PK-1).
DE
OS
     Locusta migratoria (Migratory locust).
OC
     Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
     Neoptera; Orthopteroidea; Orthoptera; Caelifera; Acridomorpha;
OC
OC
     Acridoidea; Acrididae; Oedipodinae; Locusta.
OX
     NCBI TaxID=7004;
RN
     [1]
RΡ
     SEQUENCE.
RC
     TISSUE=Corpora cardiaca;
RX
     MEDLINE=91224474; PubMed=2026322;
     Schoofs L., Holman G.M., Hayes T.K., Nachman R.J., de Loof A.;
RA
RT
     "Isolation, primary structure, and synthesis of locustapyrokinin: a
     myotropic peptide of Locusta migratoria.";
RT
RL
     Gen. Comp. Endocrinol. 81:97-104(1991).
     -!- FUNCTION: Mediates visceral muscle contractile activity (myotropic
CC
CC
         activity).
     -!- SIMILARITY: Belongs to the pyrokinin family.
CC
DR
     PIR; A49761; A49761.
DR
     InterPro; IPR001484; Pyrokinin.
DR
     PROSITE; PS00539; PYROKININ; 1.
     Neuropeptide; Amidation; Pyrokinin; Pyrrolidone carboxylic acid.
KW
                                  PYRROLIDONE CARBOXYLIC ACID.
FT
     MOD RES
                   1
                          1
FT
     MOD RES
                  16
                         16
                                  AMIDATION.
     SEQUENCE 16 AA; 1827 MW; A7178BBDCA0AFDD6 CRC64;
SQ
                          31.2%; Score 15; DB 1; Length 16;
  Query Match
                          40.0%; Pred. No. 6.2e+03;
  Best Local Similarity
                                                                  0; Gaps
                                                                              0;
             2; Conservative 2; Mismatches 1; Indels
  Matches
            2 ESYVP 6
Qу
              :: | |
Db
           10 QPFVP 14
RESULT 48
MLB SQUAC
     MLB SQUAC
                    STANDARD;
                                   PRT;
                                           16 AA.
ID
     P01207;
АC
     21-JUL-1986 (Rel. 01, Created)
DT
     21-JUL-1986 (Rel. 01, Last sequence update)
DT
     16-OCT-2001 (Rel. 40, Last annotation update)
DT
     Melanotropin beta.
DE
OS
     Squalus acanthias (Spiny dogfish).
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Chondrichthyes;
OC
     Elasmobranchii; Squalea; Squaloidei; Squalidae; Squalus.
OC
     NCBI TaxID=7797;
OX
RN
     [1]
RP
     SEQUENCE.
RX
     MEDLINE=75127390; PubMed=4375978;
```

```
RA
     Bennett H.P.J., Lowry P.J., McMartin C., Scott A.P.;
     "Structural studies of alpha-melanocyte-stimulating hormone and a
RT
RT
     novel beta-melanocyte-stimulating hormone from the neurointermediate
RT
     lobe of the pituitary of the dogfish Squalus acanthias.";
RL
     Biochem. J. 141:439-444(1974).
CC
     -!- SIMILARITY: Belongs to the POMC family.
DR
     PIR; A01471; MTDFBS.
KW
    Hormone.
     SEQUENCE
                16 AA; 1939 MW; 993AF43C8A640A0E CRC64;
SQ
  Query Match
                          31.2%; Score 15; DB 1; Length 16;
  Best Local Similarity
                          100.0%; Pred. No. 6.2e+03;
 Matches
            3; Conservative
                              0; Mismatches
                                                   0; Indels
                                                                  0; Gaps
                                                                              0;
            5 VPL 7
Qу
              \Pi\Pi
Db
           14 VPL 16
RESULT 49
ALL2 CYDPO
    ALL2 CYDPO
                    STANDARD;
                                   PRT;
                                           18 AA.
AC
     P82153;
DT
     30-MAY-2000 (Rel. 39, Created)
     30-MAY-2000 (Rel. 39, Last sequence update)
DT
     30-MAY-2000 (Rel. 39, Last annotation update)
DT
DE
    Cydiastatin 2.
OS
    Cydia pomonella (Codling moth).
     Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
OC
OC
    Neoptera; Endopterygota; Lepidoptera; Glossata; Ditrysia;
OC
     Tortricoidea; Tortricidae; Olethreutinae; Cydia.
    NCBI TaxID=82600;
OX
RN
     [1]
     SEQUENCE.
RP
RC
    TISSUE=Larva;
RX
    MEDLINE=98054539; PubMed=9392829;
RA
    Duve H., Johnsen A.H., Maestro J.-L., Scott A.G., Winstanley D.,
    Davey M., East P.D., Thorpe A.;
RA
RT
     "Lepidopteran peptides of the allatostatin superfamily.";
RL
     Peptides 18:1301-1309(1997).
CC
    -!- SIMILARITY: Belongs to the allatostatin family.
KW
    Neuropeptide; Amidation.
    MOD RES
FT
                  18
                         18
                                  AMIDATION.
SO
     SEQUENCE
                18 AA; 2169 MW; 8E66679C0CDF175C CRC64;
  Query Match
                          31.2%; Score 15; DB 1; Length 18;
  Best Local Similarity
                          100.0%; Pred. No. 7.1e+03;
            3; Conservative
                                 0; Mismatches
                                                                              0;
                                                   0; Indels
                                                                 0; Gaps
            3 SYV 5
Qу
              | | |
            3 SYV 5
Db
RESULT 50
CPAX BOVIN
ID CPAX BOVIN
                                           18 AA.
                    STANDARD;
                                   PRT;
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AC
     P22779;
DT
     01-AUG-1991 (Rel. 19, Created)
     01-AUG-1991 (Rel. 19, Last sequence update)
DT
    15-DEC-1998 (Rel. 37, Last annotation update)
DT
DE
    Cytochrome P450 2A (OLF2) (Olfactive) (P52) (EC 1.14.14.1) (Fragment).
OS
    Bos taurus (Bovine).
OC
    Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
    Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
OC
    Bovidae; Bovinae; Bos.
OX
    NCBI TaxID=9913;
RN
     [1]
RΡ
    SEOUENCE.
RX
    MEDLINE=91027757; PubMed=2121272;
RA
    Lazard D., Tal N., Rubinstein M., Khen M., Lancet D., Zupko K.;
RT
     "Identification and biochemical analysis of novel olfactory-specific
RT
     cytochrome P-450IIA and UDP-glucuronosyl transferase.";
RL
    Biochemistry 29:7433-7440(1990).
CC
    -!- FUNCTION: Cytochromes P450 are a group of heme-thiolate
CC
         monooxygenases. In liver microsomes, this enzyme is involved in an
CC
         NADPH-dependent electron transport pathway. It oxidizes a variety
CC
         of structurally unrelated compounds, including steroids, fatty
CC
         acids, and xenobiotics.
CC
    -!- CATALYTIC ACTIVITY: RH + reduced flavoprotein + O(2) = ROH +
CC
         oxidized flavoprotein + H(2)0.
    -!- SUBCELLULAR LOCATION: Membrane-bound. Endoplasmic reticulum.
CC
CC
    -!- SIMILARITY: Belongs to the cytochrome P450 family.
DR
    PIR; A35704; A35704.
    InterPro; IPR001128; Cytochrome P450.
DR
DR
    PROSITE; PS00086; CYTOCHROME P450; PARTIAL.
KW
    Oxidoreductase; Monooxygenase; Electron transport; Membrane; Heme;
KW
    Microsome; Endoplasmic reticulum; Olfaction.
FT
    NON TER
                   1
                          1
FT
    VARIANT
                                  G \rightarrow D.
                   6
                          6
FT
    VARIANT
                  11
                         11
                                  A \rightarrow E.
    NON TER
FT
                  18
                         18
                18 AA; 2058 MW; F80746F76CCD77FF CRC64;
    SEQUENCE
 Query Match
                          31.2%; Score 15; DB 1; Length 18;
 Best Local Similarity
                          66.7%; Pred. No. 7.1e+03;
 Matches
            2; Conservative 1; Mismatches
                                                 0; Indels
                                                                  0; Gaps
                                                                              0;
            4 YVP 6
Qу
              1:1
Db
            3 YLP 5
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Search completed: July 4, 2004, 04:41:32 Job time: 4.08955 secs